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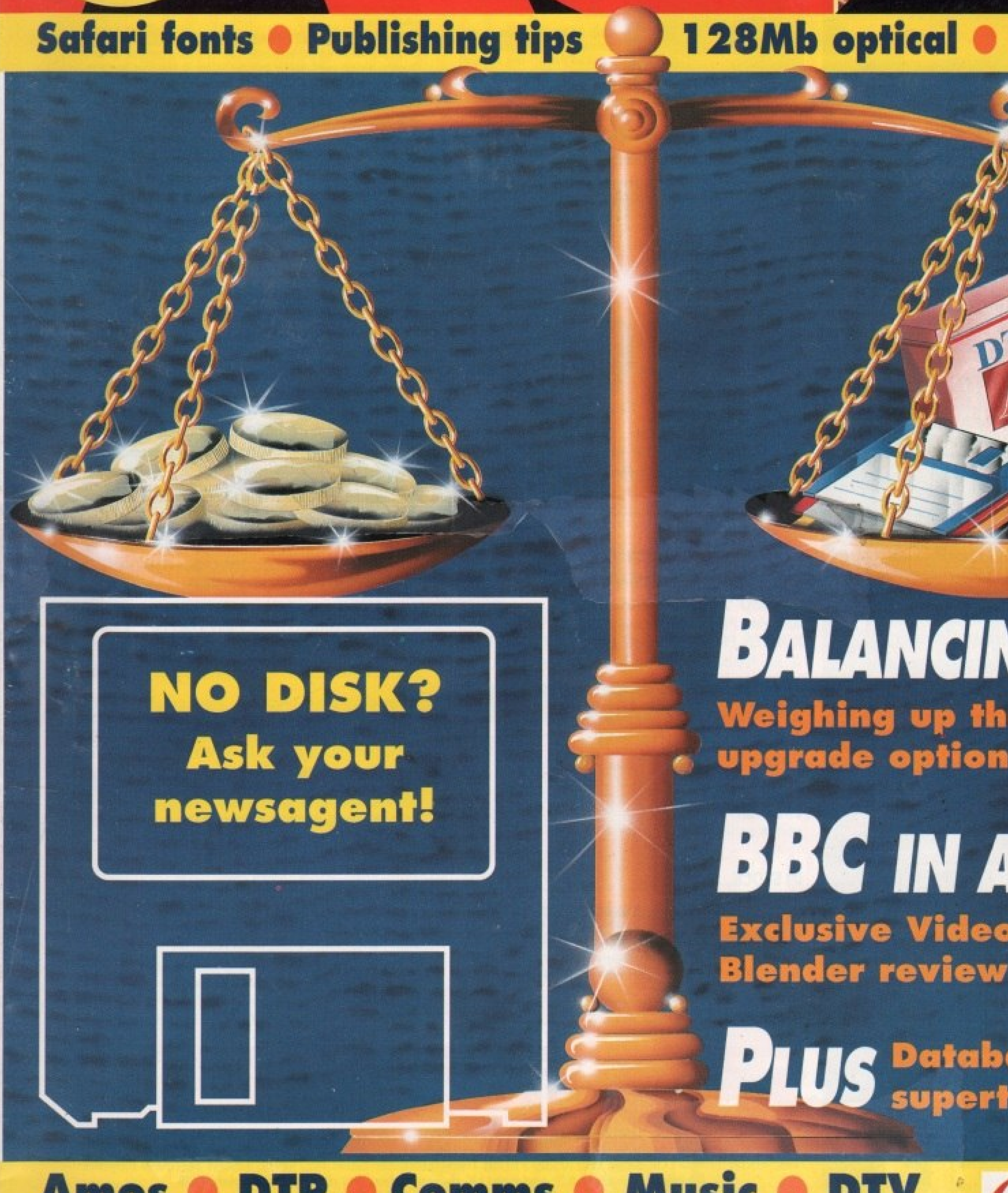
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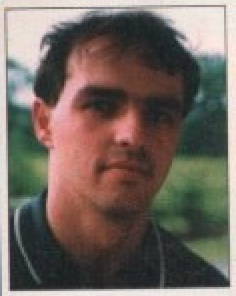
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In the pages of *Amiga Computing* each month, you will find a greater variety of views, news, and reviews than in any other magazine on the market. We cover specialist interest areas through the Almanac columns, the latest games in *Gamer*, the best new hardware and software in our feature pages, and the latest bargains in our all-new Amiga Mart buyers' guide.

No other purchase is necessary! *Amiga Computing* covers everything you will ever need from an Amiga magazine, and what's more, we do it without either baffling you with science or patronising you with baby talk. All our reviews are written with both the seasoned user and the beginner in mind, in English rather than jargonese, and we pull no punches.

We have no ties with any commercial organisation, including Commodore UK, so we have no vested interests. If a product is duff, we'll say so clearly and concisely because we know that your purchasing decisions could be influenced by what we print.

I hope you like the magazine and continue to buy it. Oh, and sorry about the photograph – they made me do it.

Stevie

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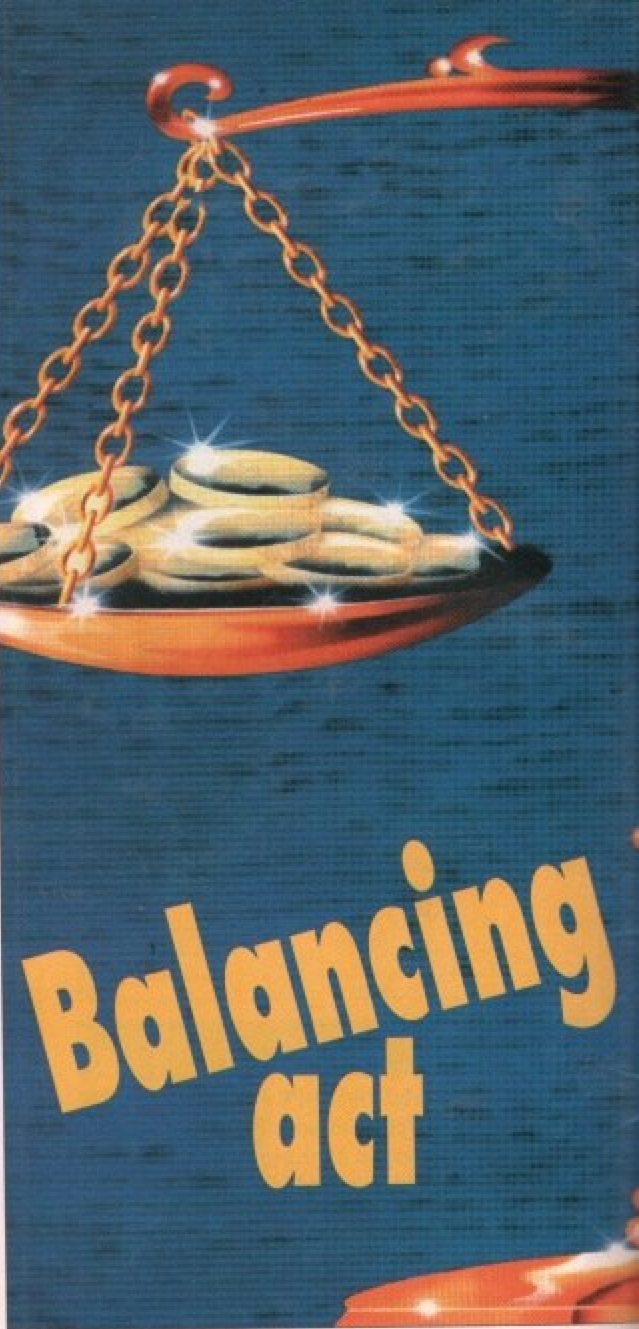
For four years *Amiga Computing* has been the leading magazine for Amiga enthusiasts. As a key member of the Europress magazine group, *Amiga Computing* promises to inform, educate and entertain its readers each month with the most dedicated coverage of the Amiga available.

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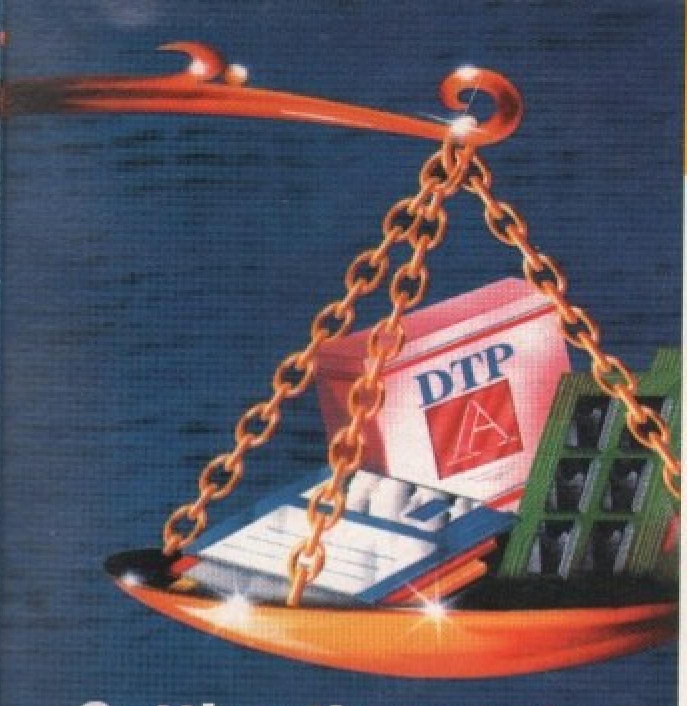
REGULARS

Turn to page 131 for the first in our new buyers' and shoppers' section, with reviews, listings, classifieds, and the VFM Top Ten. Can you afford to miss the ultimate buyers' guide?

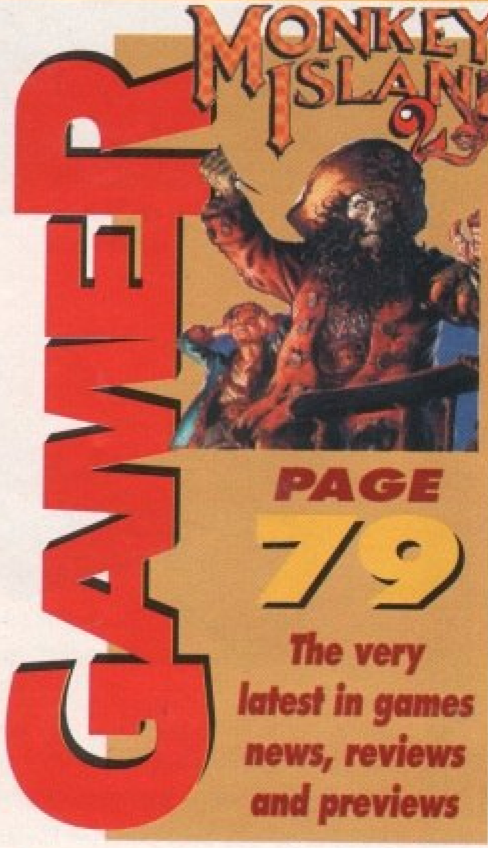


amiga almanac

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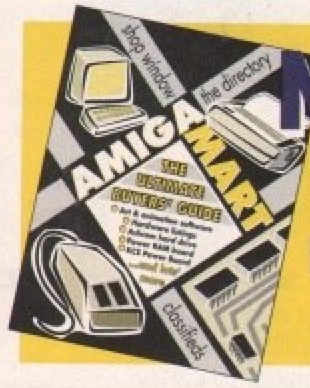


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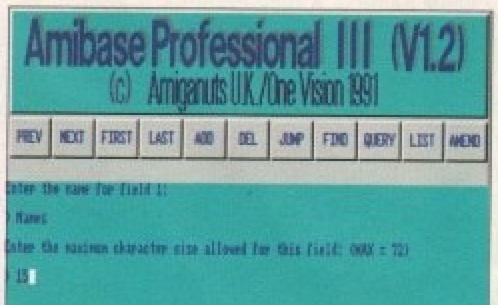
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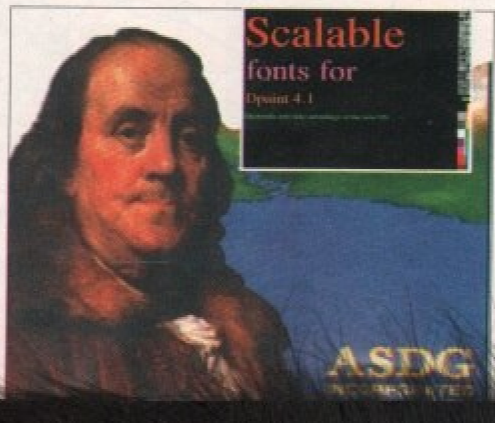


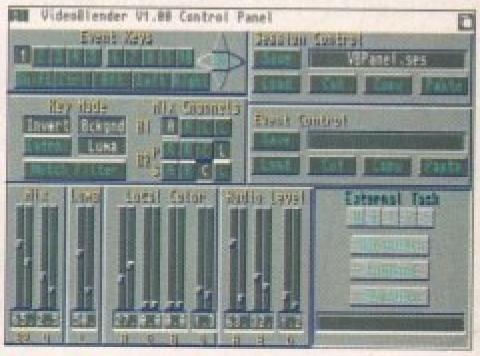
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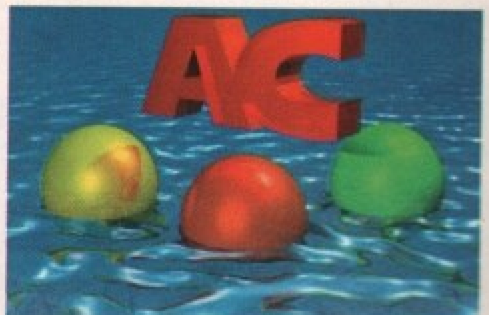
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SPECIALS









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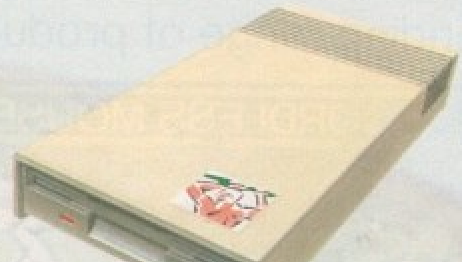




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The PC880B, the only drive to introduce Blitz Amiga, the Power anti-click device and to combat viruses, is only available direct from Power, priced at just **£65**

We have noticed how pricey unintelligent drives are. Perhaps, it's your turn to tell people where to stick it.

*Due to the precision nature of the Blitz copier high density disks may be required with some internal drives

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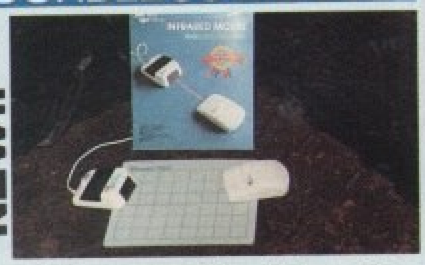


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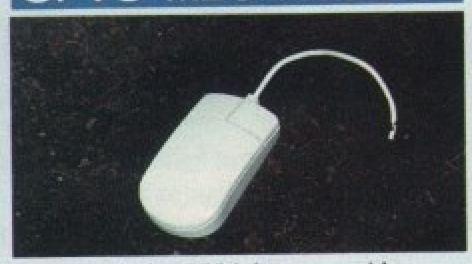
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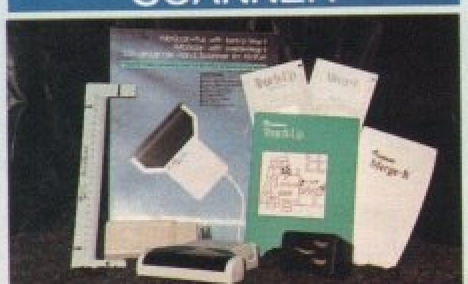
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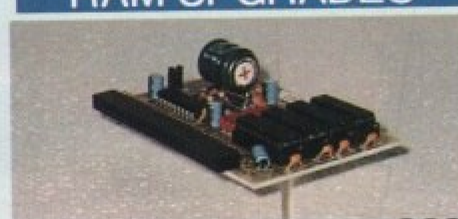
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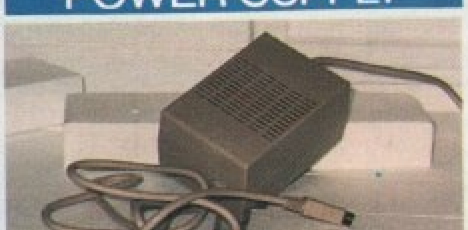
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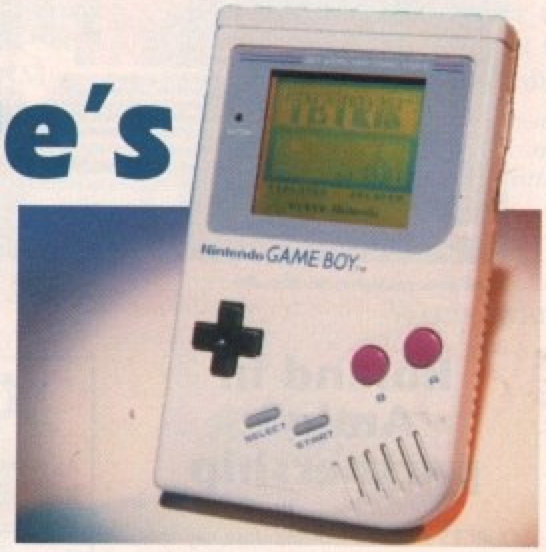
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AMIGA COMPUTING NEWSLINE AMIGA COMPUTING

by John Butters

Commodore's April Fool buy-out



Amiga link with Gameboy – an April Fool say Commodore

COMMODORE say rumours that Nintendo are negotiating a buy-out of the company were started as an April Fool's joke by a financial analyst in the States.

And Nintendo, the Japanese entertainment giant who manufacture the highly-successful Gameboy hand-held console, deny that they have even considered the move.

But speculation of a take-over has been rife for several weeks, with one financial analyst reported as telling Reuters: "there is a general consensus Commodore will eventually be acquired by someone."

Standard & Poor Corporation's Larry Freitag claimed that Commodore stock will rise to $25 per share within a year, and in the event of a take-over predicts an increase to $35 per share.

It is thought the Amiga and multimedia sides of the business are key attractions for any take-over.

Commodore share prices peaked at the end of last year at about $16 each but have since fallen back to about $12.50.

EXCLUSIVE

Developers get Workbench 3

THE AMIGA operating system has been upgraded further this month, with Commodore sending developers test copies of Workbench v3.

New features are linked mainly with graphics and enable the computer to boot up in either NTSC or PAL mode. There is also support for the proposed AA chip set, due to appear in Amigas late this year.

It allows up to 256,000 colours to be displayed in any resolution and the Workbench screen to appear in 256 colours instead of 16. Later copies of WB2.1 also carry this option.

A Commodore spokesman simply offered: "We're always continuing to work on the development of the Amiga." He would not comment on the new Amigas.

Workbench 3 can be installed on any Amiga running from WB2.1 and Kickstart 38.21 and above.

Franklin to move over



Sumner to head Commodore UK?

INDUSTRY sources say Commodore UK boss Steve Franklin is to step down as head of the country's operation in the next few weeks.

It is thought the firm's sales director Kelly Sumner will replace Franklin as managing director and an announcement of the move is expected soon. According to trade newspaper *Computer Trade Weekly*, Franklin is set to take a "senior European management role".

Commodore's Andrew Ball said: "There are no changes of senior personnel at Commodore, and I don't particularly want to comment on these rumours."

Frankin has been in the number one seat at Commodore UK for five years.

Sun shines on Amiga

BRITAIN'S millionth Amiga is to be given away to a *Sun* reader as part of a huge competition run between Commodore and the newspaper.

A monitor and one million megabytes of software – about 800 games – will be given away with the A600. The winner will also receive a special plaque.

"It's been a tremendously successful promotion," said Commodore's Andrew Ball, "and it says a lot about the product when the country's leading paper devotes a page to a single Amiga.

"Software houses made it especially attractive, and we thank them for their participation."

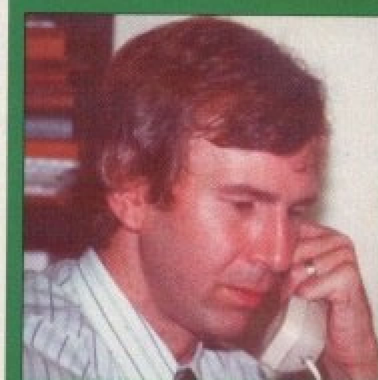
HiSoft take Kuma software

HISOFT have signed a deal to exclusively manufacture and market Kuma Computers' range of application software and promised they will extend the products to take advantage of new machines.

Technical help will be offered by HiSoft to existing users of Kuma software through the firm's Silver and Gold support schemes.

"Kuma's office application packages are a natural extension to our existing software," said HiSoft's David Link. "They consolidate our position as the leading supplier of high quality packages for the popular 680X0 computers."

Kuma boss Tim Moore: "We have traded with HiSoft since 1982 and have the utmost confidence in the company and David Link, their managing director, to care for our product range.



Link expands HiSoft with Amiga applications

"We found, as our commercial interests broadened, that it made increasingly good sense to license our products to this specialist company.

"Our software fits naturally with David's without overlap and HiSoft's success is guaranteed with major products such as the K-Spread 4 professional spreadsheet."

Kuma aim to expand in other areas such as book publishing which, they say, have overtaken software development. Telephone HiSoft on 0525 718181 or Kuma on 0734 844335.

Memory arrives for A600

WHAT is believed to be the first A600 memory expansion has been developed by Silica Systems (081-309 1111), giving the A600 up to 2Mb of memory.

Plugging into the computer's trap door, the upgrade can be bought with either 0k, 512k or 1Mb of RAM.

It has a battery-backed clock, diagnostic software and a unit disable switch to ensure that full compatibility is kept with games.

"We've copied many of the benefits that have made GVP, Roctec and Vortex so successful in their products," said Silica's Andy Leaning.

"These facts are balanced with features asked for by users in our own research and the result is what we believe is the ultimate RAM board for the Amiga.

"It has advanced features, reliability and solid engineering supported with good, clear instructions, long warranty periods and a low price," he added.

Going faster with GVP

ANOTHER multi-functional accelerator has been released for the Amiga, this time enabling A500s to run from a 40MHz 68EC030 processor.

Great Valley Products' A530 Turbo can have up to 8Mb of 32-bit DRAM added and features a socket for an optional maths co-processor.

It also has a built-in SCSI controller, a choice of hard drives and a switch to conver the Amiga back to 68000 mode and disabling the drive and memory.

Said GVP's Jeff Boyer: "We've incorporated every possible feature into our system necessary to transform an A500 into a machine that rivals those costing thousands of dollars more."

Silica Systems (081-309 1111), the UK distributor of GVP products, are selling the accelerator with a 52Mb hard disk drive and 1Mb of memory for £749.



XCad goes to Digital Multimedia

XCad finds new home

DEVELOPMENT and distribution of computer-aided design package XCad has been transferred to Digital Multimedia (0702 206165) and two new versions of the package have been announced.

XCad 2000 requires 1Mb of memory and includes 2D detailing and 3D modelling with automatic perspective views.

Industry-standard graphics tablet support, extra commands and 3D surfacing commands are among the features of XCad 3000. It needs 2Mb of memory and a multisync monitor.

Prices for the packages are £129 for XCad 2000 and £329 for XCad 3000, although they cost £85 and £190 respectively until the end of July.

Roland in Amiga partnership

SOURCES close to Commodore say that the new Amiga sound chip is being produced in partnership with Roland.

It will feature eight stereo voices – making 16 total channels – with custom controller chips for digital sampling and compression.

The resolution of samples will be full 16-bit and it is thought that a custom compression chip will help manage the digital data.

CD drive promised

AS *Amiga Computing* went to press, Commodore promised that a limited supply of their long-awaited A570 CD-ROM drives were set for release.

Commodore's sales director Kelly Sumner said that while volume shipments of the drive will start in July, full availability of the A570 may not occur until after the summer.

The manufacturer has recently improved the drive's specifications by enabling it to accept memory and hard disk expansion within its case.

Commodore were unable to confirm its price but a leading dealer reported it will be £399.99.

By the end of the year, the firm expects to have sold 100,000 of the drives, which enable A500s to use compact disc-based software developed for the CDTV player.

The giant are also developing a CD-ROM drive for the A600. It will be called A670, and dealers have been told to expect it around September priced at £399.99

Calling all Amigas

VOICEMAIL is to be introduced to the Amiga soon, with the release of PhonePAK VFX from US peripheral giant Great Valley Products.

Plugging into the A2000, callers can access a user's mailbox to record a voice or fax message, whether the user is in or not. Mail can be retrieved remotely by telephone or screen interface.

"PhonePak VFX heralds a new era in desktop multimedia technology," says GVP president Gerard Bucas.

"This surprisingly affordable system is a complete hardware and software solution that actually advances the state of the art in modern communications."

However, it is unknown whether the board will be sold through the UK's supplier of GVP products, Silica Systems (081-309 1111). As we went to press, the dealer said that because PhonePak does not have British Telecom approval, they are unsure whether it has a future in Britain.

More Fun School promised

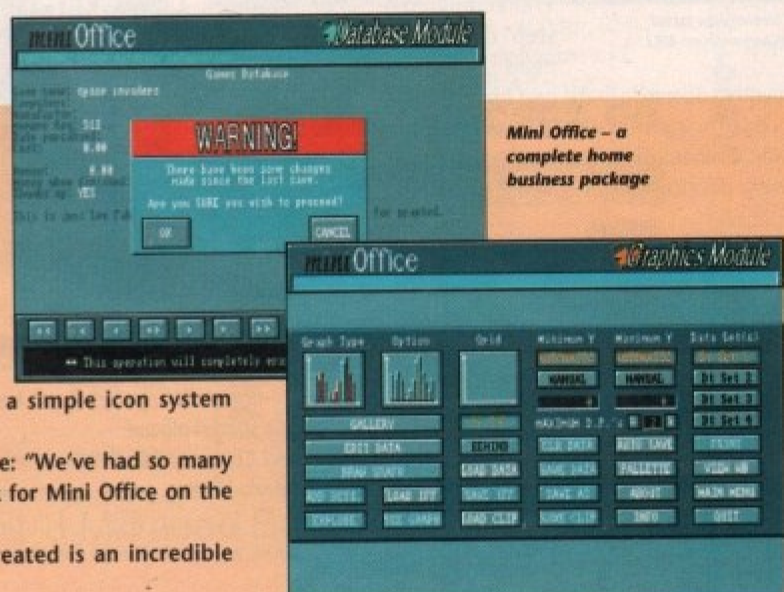
MAKERS of the popular Fun School education series, Europress Software, have announced that Amiga users can expect version five of the software next year.

Aimed at three age ranges – under 5s, 5 to 7s and 7 to 11s – it will feature new areas and methods of presentation. Europress Software are on 0625 859333.

Tuned in to games

BRITISH television's first dedicated computer games show, Gamesmaster, is to return this autumn with a 26-week series.

Starting in September, the Channel 4 programme is hoping to keep its presenters Dominik Diamond and Patrick Moore.



Mini Office – a complete home business package

Office at home

POPULAR home business package Mini Office is due for imminent release on the Amiga, Europress Software (0625 859333) have announced.

A wordprocessor, spreadsheet, database, graphics program and disk utilities are integrated with each other and a simple icon system ensures the package is easy to use.

Said Europress Software boss Chris Payne: "We've had so many Amiga owners, dealers and distributors ask for Mini Office on the Amiga that we just had to do it.

"What our development team have created is an incredible package at a sensible price."

You deserve the best!

Now you can get the best... with PEN PAL!

A superb package, with immense power, to fulfil all your word processing requirements and... it includes a Database! It's all so easy to use, you probably won't need to refer to the extensive 250 page manual too often.

Whilst working, you can open up to four documents simultaneously (memory permitting), search and replace; cut, copy and paste; check your spelling with a 100,000+ word dictionary. You can import your favourite IFF/HAM graphics, from programs such as DPaint II or Clip Art files in various sizes and colours. You can automatically flow text around graphics in any Workbench compatible font (there are over 200 available styles), in different sizes and colours to suit your design... even as you type. All this from a word processor and... Much, Much, More!

As you can see, this is not just any ordinary word processor! Full Page View with position, edit and creation of graphic objects. Mail Merge using the built in database and forms designer. Creation of templates for complex reports, into which the database can be merged.

Operating with 32 fields per record, and 32,000 records per database with a fast sort of 1000 records in less than 5 seconds this is a *real* database.

Pen Pal requires an Amiga 500/1500/2000 or 3000 with a minimum of 1megabyte of available memory.

Pen Pal

When...you deserve the best!

£79.95



."...its handling of graphics is unsurpassed: Pen Pal is the only program I tested that will automatically wrap text around graphics..."
Amiga World...Jul. '90

."..without beating around the bush Pen Pal is very special.." - "There is little to fault Pen Pal and it deserves to do well." *Amiga Format...Dec. '90*

"...I am extremely pleased with your product especially the Graphic Capabilities within the Word Processor. Having the Database on the same disk has made PEN PAL the best program I have..." *D.S.B., Plumstead, LONDON*

"...Please let me tell you how amazed I am at how EASY IT IS TO USE PEN PAL. The manuals supplied are very informative and very clear..."
P.S.S., Clifton, NOTTINGHAM

"...A most excellent piece of software..."
E.P.H., Strathclyde, SCOTLAND



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Telephone: 0773 836781 Facsimile: 0773 831040

GORDON HARWOOD HARWOOD HARWOOD *Computers*

Budget inkjet launched

FUJITSU (081-573 4444) have released a "very low cost" inkjet printer for personal and small business computer users.

The B100 gives bubble inkjet printing with a draft speed of 160 characters per second and resolutions up to 600 x 300 dots per inch. It has six resident fonts, an optional 13 additional font cards and two soft font kits.

HP DeskJet Plus emulation is used, with IBM Proprinter 4201 and Epson FX-850 available as options.

Price: £349.

Fusion price cut

GERMAN developer Advanced Computer Designs (010 49 421 3463 60) have cut the price of their 68040 accelerator for A2000s from £1,400 to £995.

Fusion 40 runs at 28MHz and is supplied with 4Mb of memory.

And ACD have confirmed that they are developing a 33MHz version of the board. It can be populated with up to 128Mb of RAM and will be available later this year.

Rise of the Phoenix

IN LAST month's news story about the new range of Phoenix products, we implied they were produced by First Choice Computer of Leeds.

They are products of Phoenix Ltd, and merely distributed by First Choice. The phone number we supplied was correct. Our apologies to all concerned for any confusion this caused.

WP prices slashed

IN A move to get New Horizons' QuickWrite and ProWrite recognised as standard Amiga wordprocessors, their UK distributor has slashed the price of both packages.

ProWrite 3.2 sees a cut of £50 to give it a new price of £79.95, while QuickWrite is reduced by £10 to £39.95.

"They have all the features of power programs but their ease of use makes them ideally suited for home and new users," said a spokesman for Silica Systems.

"By dropping the price we feel they are perfect for such users and we expect ProWrite and QuickWrite to become the standard Amiga wordprocessors for all levels."



Type costs cut

A LIBRARY containing more than 600 typefaces for use with desktop publishing package PageStream 2 and other PostScript font-compatible applications is now available at a reduced price.

Fonts contained in Soft-Logik's TypeFace library sell for $12.50 for each typeface weight and style, and are sold by font families only. The minimum order is $100.

The St Louis-based firm can be telephoned on 010 1 314 894 8608.

Many fonts

A SET of 37 Compugraphic Type format fonts can now be bought for use in a range of Amiga packages such as Professional Page, Pagesetter 2, PageStream 2 and for use under WB2.

The three-disk pack costs £9.99 from George Thompson Service, Cucumber Hall Farm, Cucumber Lane, Essendon AL9 6JB.

Cheats from Kuma

PEOPLE interested in the leisure aspect of the Amiga are being targeted for *Corish's Computer Games Guide 3rd Edition*, the latest book from Kuma Computers (0734 844335).

The 750-page guide uncovers backdoor codes left by developers, cheats and tips for more than 1,250 games and 200 adventures. Price: £14.95.

Golden Image continue

RUMOURS of the collapse of Golden Image have been dismissed by the firm's UK supplier as "totally inaccurate".

Golden Image Distribution UK (0772 203166) have been granted exclusive rights to distribute the peripheral manufacturer's products in the UK from their Preston head office.

Bite of the Apple

AMIGA users will soon to be able to use quality software available for expensive Apple Macintosh computers on their machines.

Emplant, developed by Arizona-based Utilities Unlimited, enables any Amiga to emulate a Macintosh IIx once the appropriate Apple ROMs have been bought and fitted to the board.

Software-driven, the emulation platform plugs into Zorro II/III slots on the A2000 or A3000s and the side expansion port on A500s. There are no immediate plans for an A600 version.

To get the best results, the manufacturer recommend that at least 2Mb of memory and a 68030 processor are fitted to the Amiga.

Some of the components on the board are currently unused but later in the year IBM PC emulation will also be possible through the board.

Emplant can be bought as a standard board, with high speed Mac serial ports and Apple Talk support, a SCSI interface or as a Deluxe model with all the options.

Without Apple ROMs the prices are £165, £185, or £205 for Emplant Deluxe.

Utilities Unlimited are on 010 1 602 680 9004 but in the UK call BlitSoft on 0908 666265.

Do you know something we don't?

Although *Amiga Computing* has scores of contacts in the Amiga world, we need you. If you have some hot news ring John Butters on the news desk now on 0625 878888 or fax to 0625 879966.

All information supplied will be treated in the strictest of confidence.

DIARY DATES

10 to 12 July 1992
6th International Computer Show
Organiser: Westminster Exhibitions
(081-549 3444)
Venue: Wembley Exhibition Halls, Lon
The second show of the year, for a event that's getting more and mo support from the industry and spons ship from *Amiga Computing*.

19 July 1992
All Formats Computer Fair
Organiser: Bruce Everiss
(0225 868100)
Venue: National Motorcycle Museum Solihull
You could discover a few bargains.

6 to 8 September 1992
European Computer Trade Show Autu
Organiser: Blenheim PEL
(081-742 2828)
Venue: Business Design Centre
A new trade-only event for the com puter leisure industry.

5 to 8 November 1992
World of Commodore '92
(0225 442244)
Venue: Earls Court 2, London
A Commodore-specific exhibition, w plenty for Amiga users.

19 to 22 November 1992
Christmas Computer Shopper Show
Organiser: Blenheim PEL
(081-742 2828)
Venue: Olympia, London
Promised to attract several Amiga exhibitors.

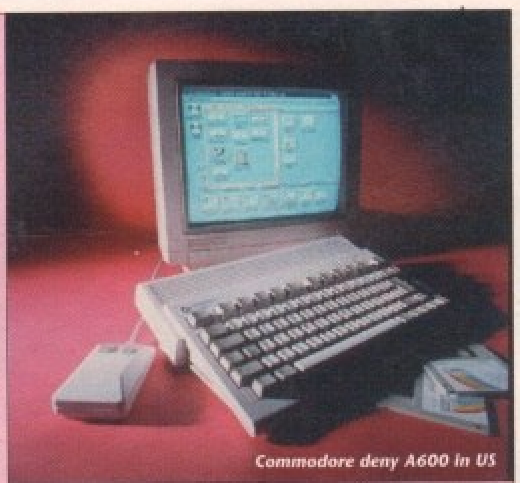
OVERSEA

8 to 11 October 1992
Computer Shopper Show
Organiser: AMI Shows Europe
(010 49 2234 22021)
Venue: Koln Messe
A chance to catch up on the year developments in the active Amig world. Formerly Amiga Koln.

26 to 29 November 1992
World of Commodore '92
Organiser: Fairs & Fun
(010 49 8106 34094)
Venue: Frankfurt Exhibition Halls
The main Commodore show in Germany. 100,000 visitors expecte

● If your company is organising a sh relevant to the Amiga and it's not lis let us know so we can include the in mation in the diary.

● As temperatures reach the upper 90s here in the States (that's fahrenheit, of course – we're hot, but not quite boiling yet), the heat is on for Commodore to get new Amigas out with faster processors and better graphic chip sets.


Commodore deny A600 in US

IBM clones with SuperVGA graphics and 486/33 processors have plunged below $2,000 in price, and Amiga dealers are feeling the pressure.

With *AmigaWorld* reporting that the A570 may be delayed in the US, and Commodore's refusal to even acknowledge – much less release – the A500 Plus and A600 over here, folks are holding out hope that the US sales operation are just hedging their bets on new machines to be released later in the year.

I hope that this is the case, as many US software manufacturers are considering dropping Amiga support – it's just too difficult to convert VGA games that require a 386 to run on a 7MHz 68000 running with 64 colours or less.

Whats New USA

Denny Atkin reports...

Warp 33, Mr Scott

Texas-based Motorola have announced that they are now shipping the 33MHz version of their 68040 processor.

According to Motorola benchmarks, an Apple Mac Quadra running the 33MHz 040 chip performs 20 per cent faster than a 50MHz Intel 486 system. An Amiga equipped with this chip should be even faster.

The first Amiga product to use this faster version of the 040, the CSA 40/4 Magnum, is now shipping in quantity. The Magnum board is a top level device targeted at Amiga video pros, such as Toaster users, and is priced as such.

Equipped with a 33MHz 68040, 1Mb of super-fast SRAM (Static RAM), 16Mb of speedy DRAM, high-speed serial and parallel ports (speed seems to be the key word with this device), the board is priced at a steep $4,995.

However, all is not lost for the speed-crazed Amiga nut who doesn't want to sell his car to make his 1500 or 2000 run faster. CSA are about to introduce a new consumer model of the 40/4 Magnum that will be retail at only $1595.

Final specifications are still being set, but it's known that the board will ship with less RAM – and probably sans SRAM – and probably without any of the expansion ports.

However, the consumer-level board will be expandable to include all the capabilities of the $4,995 professional Magnum. So you can get the Magnum now and load it up later.

Jump for the disk!

Long before anyone had heard of the coverdisk, a cute little disk magazine emerged from Chico, California, called *JumpDisk*. Now in its sixth year of publication – longer than any Amiga mag except *AmigaWorld* – *JumpDisk* has stuck around while many other Amiga mags have been and gone.

Every other disk-based magazine in the US has failed for various reasons, including *A.X.* and *AMnews*, but *JumpDisk* just keeps on going – perhaps because it never tries to do too much.

It has never added a paper edition, multiple disks, or free sweeties with every issue. And it's never tried to grow to kill *AmigaWorld* or *Byte* – each issue is hand-duplicated using Amigas in the editorial office.

What it does provide is a disk full – and I mean full – of great little utilities, games, applications, and news stories. Editor Richard Ramella is a dedicated Amiga fan, and it shows in the quality of the articles and programs he's able to assemble for each issue.

While it doesn't have the flash and dash of the European coverdisks, it's a fun read (with luminaries such as Info's Mark R Brown and Morton Kevelson, as well as Nico Francios, providing some of the text) and is always packed to the last few blocks with neat little programs.

It also provides a better feel for what's going on in the US Amiga market than the slick magazines. At $9.95 per issue, it's a great bargain. Contact JumpDisk, 1493 Mt View Ave., Chico, CA 95926 for more info, or call (916) 343-7658.

Maximum Maxis

RoboSport is Silicon Valley-based Maxis' best Amiga game since SimCity. It's a bizarre but well realised combination of the best elements of sports and strategy games. You control a team of cute little robots armed with bombs, bullets, grenades, missiles, and other fun little weapons.

This team, of course, is out to destroy the other teams of cute little robots. Actually, there are a number of other game variations, some of which are a bit more peaceful, including Treasure Hunt, Capture the Flag, and Baseball.

Each turn involves you "programming" the robots (don't worry – it's point-and-click programming, replete with helpful gadgets and a bit easier than Amos!).

You move your robots around one of 24 battlefields, programming them to battle the other teams. After you program each robot, the game then goes into "movie mode," allowing you too see the results of the battle. If all else fails, you can send your droids in on a kamikaze mission.

RoboSport was ported to the Amiga by The Dreamer's Guild, namely Joe Pearce and David "Talin" Joiner, who you may know as the whizz behind the classic Faery Tale Adventure.

These guys know the Amiga well, and it shows in the quality of the port. This game uses AmigaDOS Release 2.0-style menus, gadgets and windows, as well as ear-popping digitised sounds.

It is quite speedy, much more so than the recently-released SimAnt. And owners of systems with flicker fixers – or people who just like their screens to strobe violently – will love the hi-res screen option.

The game looks as good as a Mac II or PC SuperVGA game in this mode. Of course, if you're short of Chip RAM, or you want to avoid flicker, just run the program in lo-res mode.

The computer players put up a challenging game, but like any sport or battle, nothing beats the sheer deviousness of a human opponent. RoboSport offers a plethora of multi-player options.

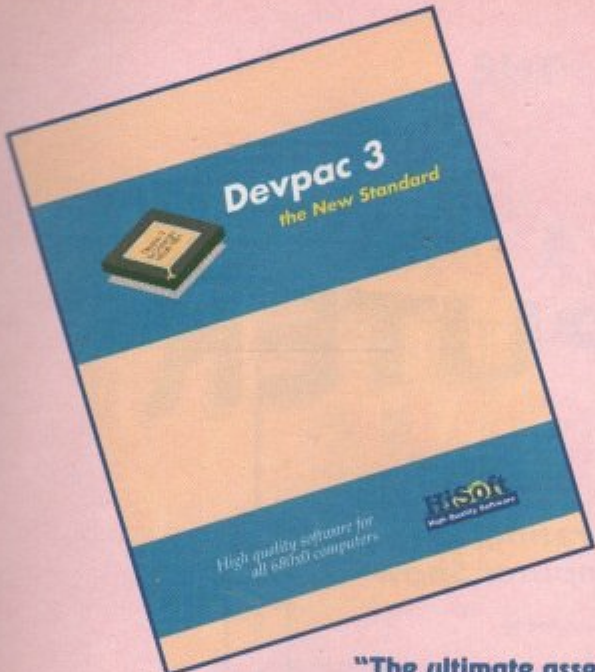
You can take turns on a single computer, attach two computers together via their serial ports, play over a modem connection, or – using a feature so bizarrely advanced for a game that perhaps 20 people will ever use it – connect a number of Amigas together using Commodore's TCP/IP networking software and Ethernet cards.

The game is hard-disk installable, works under Workbench 1.x and 2.x, and supports all Workbench printers. 1Mb of RAM is needed for lo-res; 2Mb for hi-res.

If you like a challenging strategy game, and can live without 600 frames-per-second real-time polygon action, pick up RoboSport.

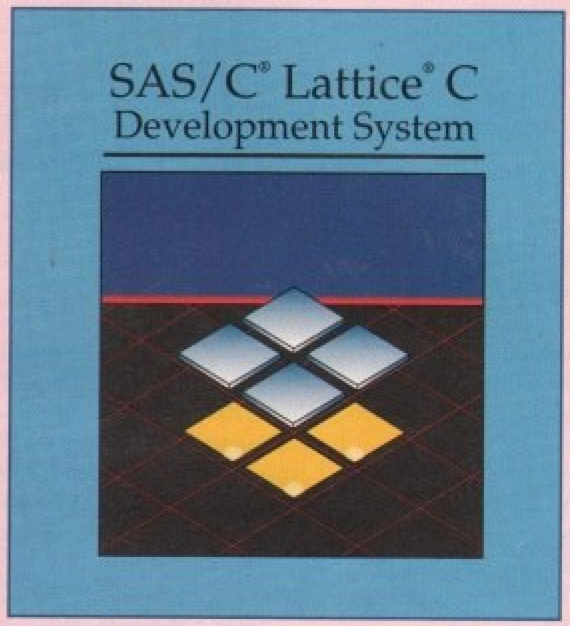
Some reasons to be cheerful

HiSoft is renowned for its range of language systems, utilities and entertainment programs on the Amiga. We have been writing for the Commodore 680x0 computers since they were first introduced into the UK and thus we know both the hardware and software intimately. Our company policy is always to offer the highest quality software at an affordable price with a complete range of backup support options - in these uncertain, difficult times, we'd like to put a smile on your face.



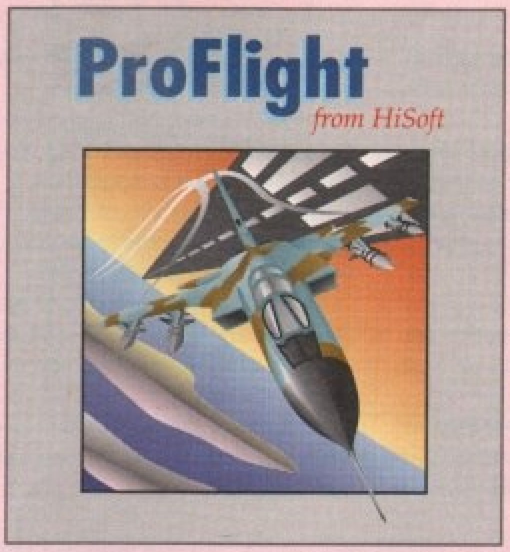
"The ultimate assembler language system"

Amiga Format Gold 4/92

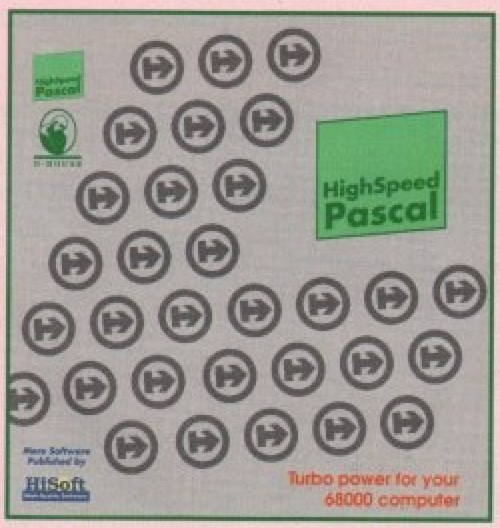


The professional C development package

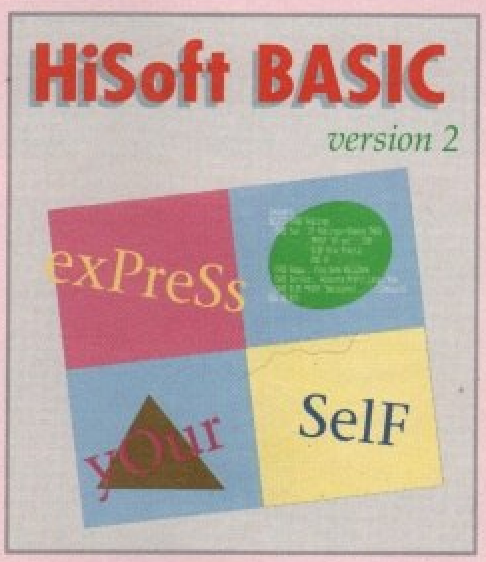
includes free Silver Support service



The most accurate flight sim yet ...



The new Pascal compiler with Turbo Pascal® compatibility



Coming soon to an Amiga near you!

Stop-Press

We are delighted to announce that, following an exclusive agreement with Kuma Computers Ltd, we have taken over the distribution, support and development of their popular Amiga products. Existing Kuma customers should write to us or call us for details of our support schemes and information on our plans for the future of Kuma software.

At the moment we have the popular K-Spread 4 spreadsheet and K-Data database available (see our order form on the right).

We also have stock of all the 3rd Edition Amiga ROM Kernel manuals from Addison Wesley, together with the excellent 3rd Edition of The AmigaDOS Manual (Bantam Press).

HiSoft
High Quality Software

for more information on any of our products, please call HiSoft on 0525 718181, or fax us on 0525 713716 or write to us at: The Old School, Greenfield, Bedford MK45 5DE UK.

Free gifts!

(subject to availability)

HiSoft Software is available from all good computer shops. If you should have difficulty in obtaining any HiSoft product, you can order directly from HiSoft using this order form. You can pay by post/fax/telephone using Mastercard/Access/Visa/Switch/Connect etc. or simply send us a cheque/PO. Some free gifts are available for direct purchases. Prices include P&P and VAT within the UK.

SAS/Lattice C 5.10b inc SS	£229.00	☐
HighSpeed Pascal	£99.95	☐
HiSoft Devpac 3	£69.95	☐
Power BASIC	£39.95	☐
HiSoft BASIC 1.05 inc Extend	£59.95	☐
ProFlight Tornado flight sim	£39.95	☐
K-Spread 4 spreadsheet	£89.95	☐
K-Data database	£39.95	☐
ROM Kernel - Includes & Autodocs	£36.00	☐
ROM Kernel - Libraries	£36.00	☐
The AmigaDOS Manual	£24.00	☐

Name:

Address:

Please send me the software/books that I have selected, together with my free Managing with Fax book (worth £12.95) and disk wallet (worth £2). I wish to pay by:

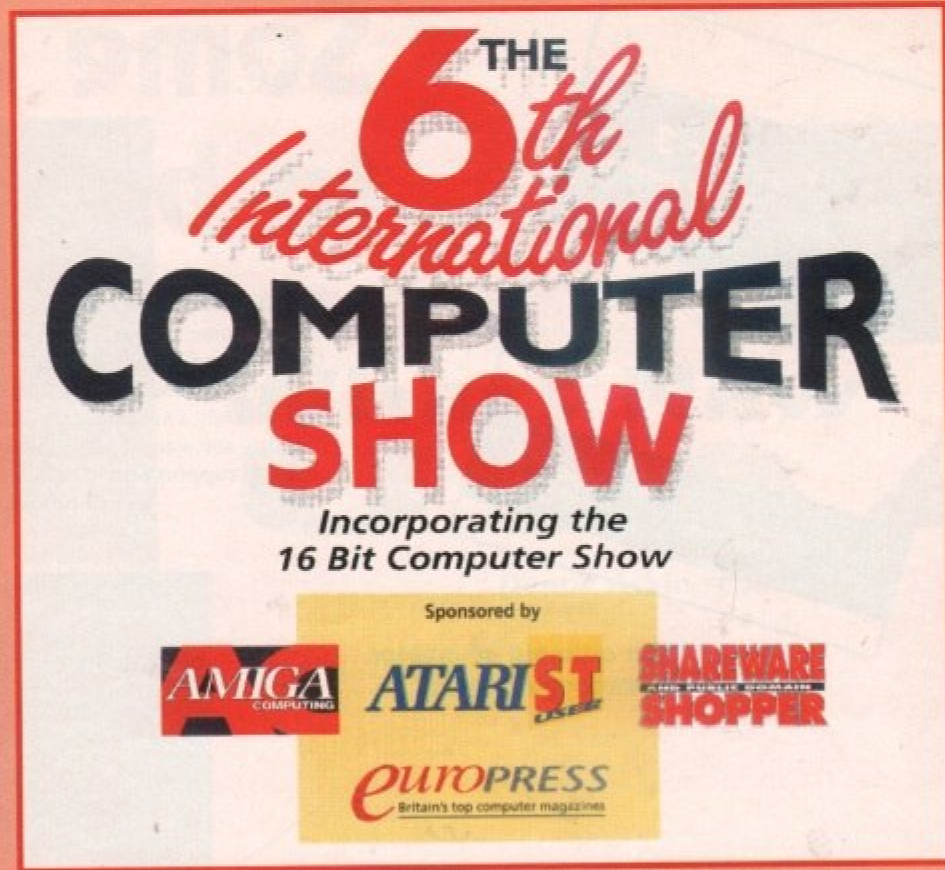
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Expiry Date

Signature

HiSoft
The Old School, Greenfield, Bedford MK45 5DE



A N EXCITING line up of competitions, advice, and new product demonstrations and releases awaits Amiga users at the forthcoming 6th International Computer Show.

Between July 10 and 12, everything of interest to Amigaphiles will be on show at the giant Wembley Exhibition Centre, London. For the first time *Amiga Computing* is sponsoring the show.

That means you'll not only get a chance to meet staff from the magazine, but also a rare opportunity to quiz our technical aces on anything related to the Amiga.

Music, desktop publishing, AmigaDOS, upgrades and 24-bit technology are just some of the many areas you'll be invited to ask questions about.

Advice

And for anyone considering buying a new computer, or a piece of software or hardware for their existing machine, we'll be running a separate advice centre to guide you to the right choice.

Help will be given in a non-technical, jargon-free way and because we're totally independent you can rest assured that all recommendations will be completely unbiased.

We expect both of the free centres to be busy so why not make an appointment for a specific time through one of our representatives at Stand 66? When you return, we'll be waiting.

Of course, games are a key area for the Amiga and we recognise that in our unique leisure section, *Gamer*, which is also to be represented in force at Wembley.

Visitors will be able to test their driving skills against others in a special Gamer Challenge, featuring Gremlin's racing hit Lotus Turbo Challenge 2.

Fifty copies of the game are to be given to high scorers and the top driver at the end of the three-day event will be sent a fantastic package of games worth more than £500.

Bargains

Longwave radio station Atlantic 252 are to broadcast live from the event with regular phone-ins, show news updates and interviews with visitors passing console magazine *Sega Force*'s Force Field Plaza.

For the increasing number of home and teleworkers there will be a display of the latest wordprocessors, spreadsheets, DTP packages and modems and small business advisers will be on hand to guide visitors thinking of setting up their own business.

But one of the main reasons why the show – formerly the 16-bit Computer Fair – has become such an important diary date for computer enthusiasts is its reputation as an Aladdin's cave for bargains.

Organiser, Westminster Exhibitions, expect more than 180 exhibitors from around the globe to attend and say that many will be unveiling new Amiga products or selling off existing stock at rock bottom prices.

Launches

Among the companies planning a presence are Power Computing, Roland, Rombo, HiSoft and Microdeal.

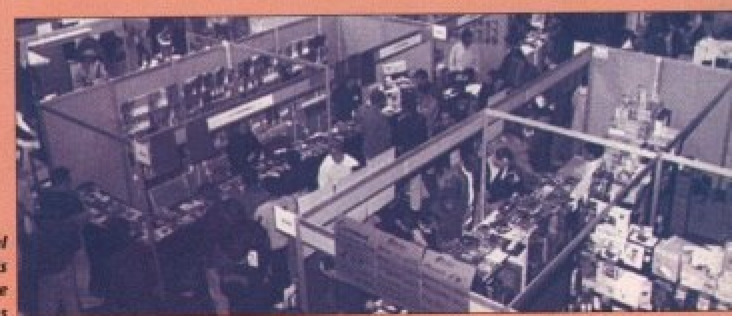
Each develop their own interesting hardware or software for the Amiga and should be watched for launches and heavy discounting. If you really want to catch a few bargains search around the various pu domain and shareware libraries.

Software, sometimes as good as expensive comm cial packages, can be picked up for little more than price of the disk it is supplied on.

There are hundreds of Amiga programs to cho from and you'll be able to get hold of many of them the International Computer Show.

Before setting off remember to turn to show advert on page 18 and cut out the spe voucher which guarantees you save £1 on the en price.

Its opening times are 10am to 6pm on Friday Saturday and Sunday visitors can attend betw 10am and 4pm.



The International Computer show is an Aladdin's cave for bargains

How to get there

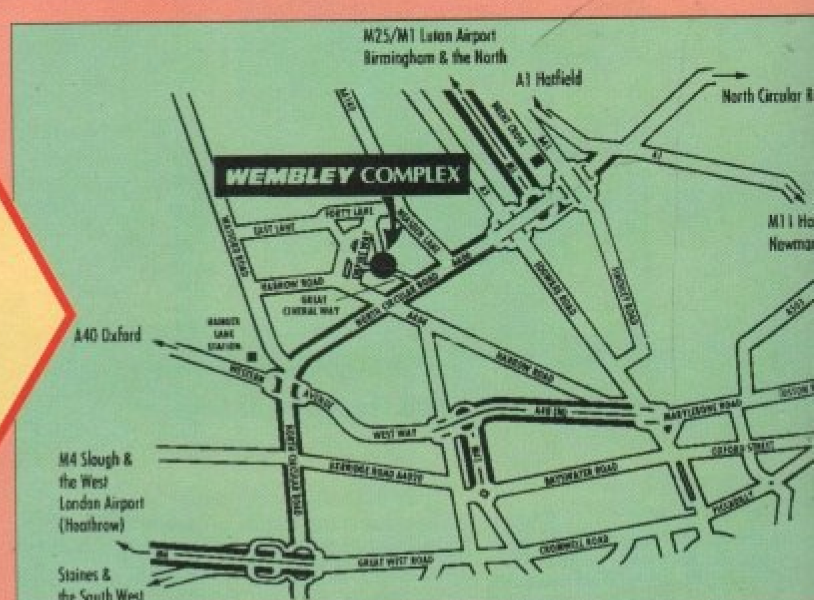
BY BUS:

Numbers 83, 92 & 182 come to Wembley Arena, 28 comes to the Triangle (five minutes walk). 297 (alight at Wembley Park Station) and 245 (alight at Bridge Road) serve the complex.

BY TRAIN:

Underground:
To Wembley Park by Metropolitan Line or Jubilee (Stanmore) Line
To Wembley Central by Bakerloo Line (peak hours)

British Rail
To Wembley Central from Euston or Broad Street
To Wembley Stadium from Marylebone



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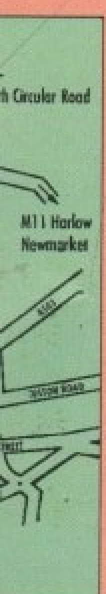
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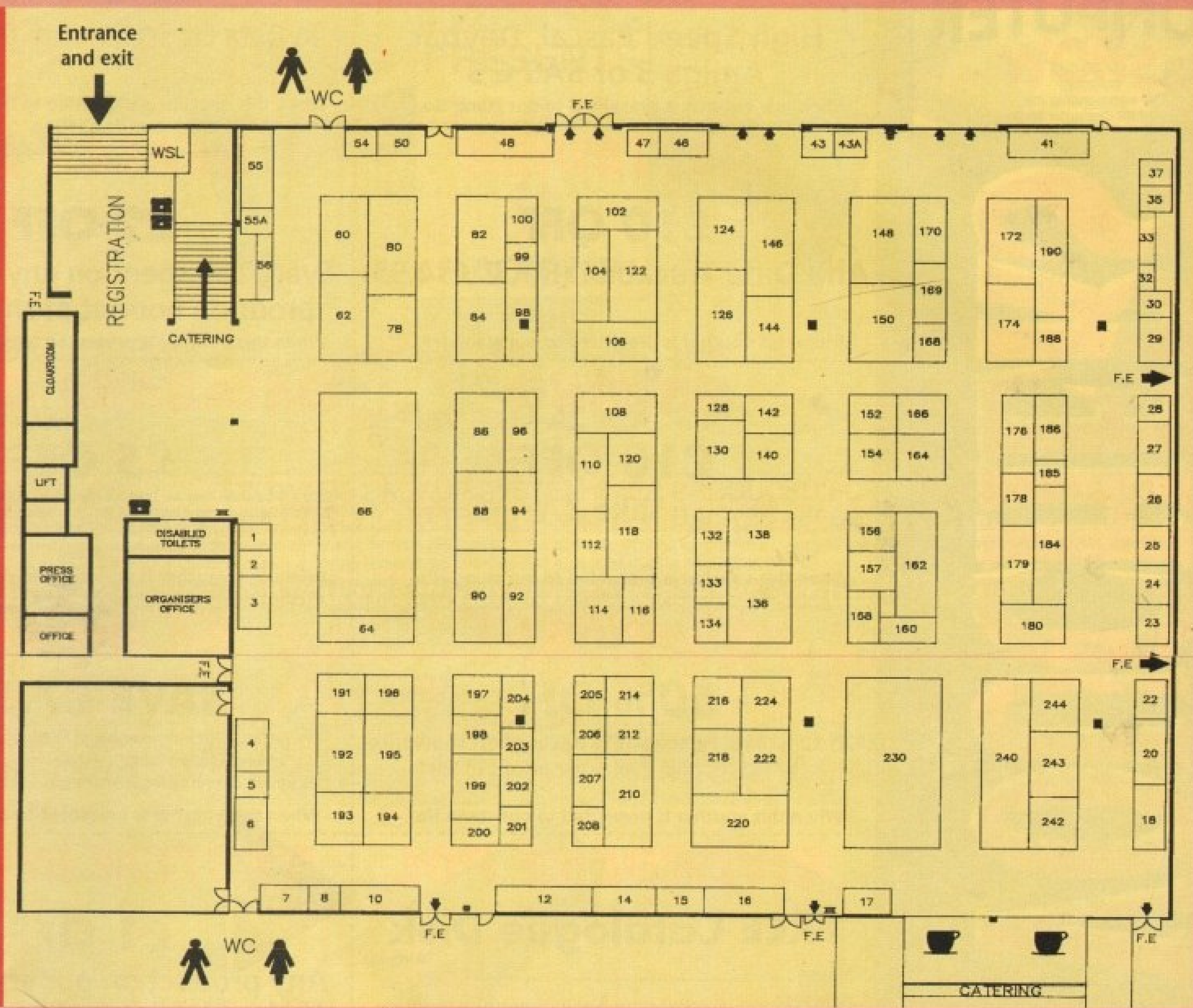
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FLOORPLAN



List of exhibitors

Exhibitor	Stand
Amiga Computing	66
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Allied Dunbar	15
Amiga Warehouse	84
Aquarian Public Domain	201
AVR	205
B.A.C.C.	99
Bare Necessities	140
Best Electronics	202
Book Club Association	188
Brighton Computer Supplies	120
Brixton Exchange Mart	132
Bruce Smith Books	2
Care Electronics	46
Chicken Shit Software	16
City Beat	191
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All information correct at the time of going to press.

THE 6th International COMPUTER SHOW

Incorporating the 16 Bit Computer Show

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When this voucher is presented to our stand No. 242

GASTEINER

£10 OFF

Alfa Data Trackball (R.R.P. £34.95)

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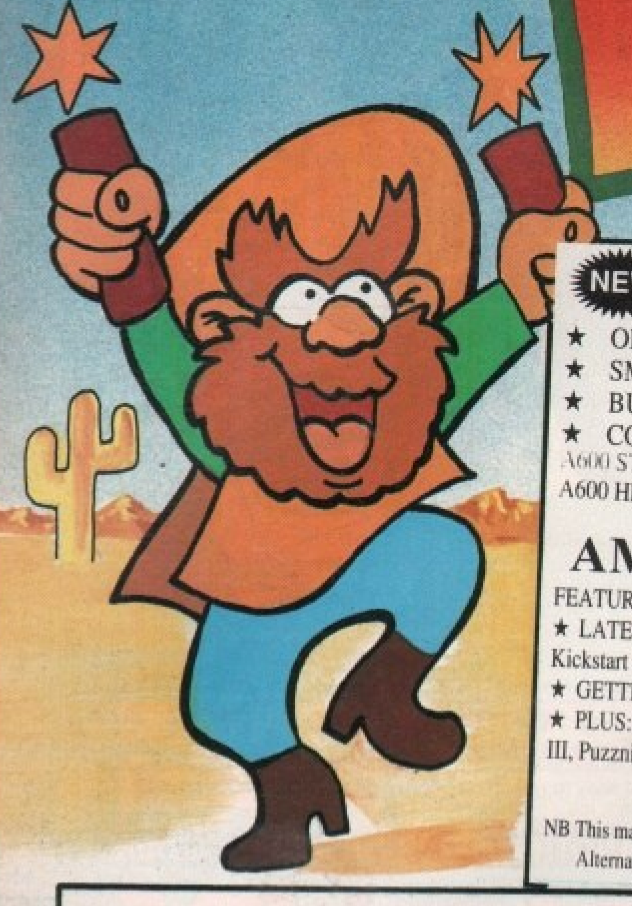
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COMPUTERS

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Complete Colour Solution	£99.99
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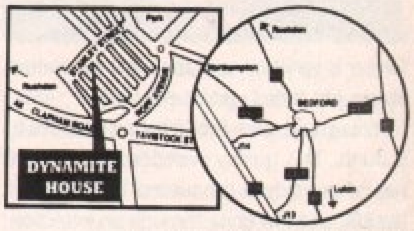
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COMPRISES: TUTORIAL, KINDWORDS 2 (WORDPROCESSOR) PAGESETTER + HEADLINE FONTS + ARTISTS CHOICE (EASY DTP)

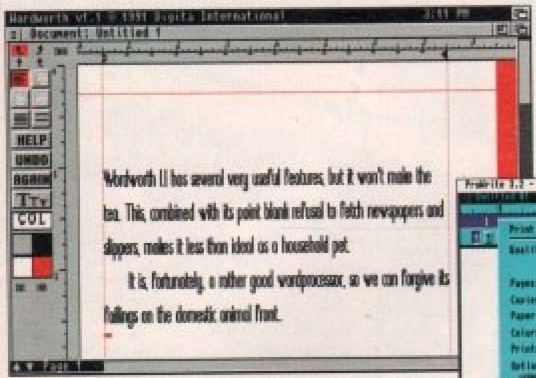
This pack used to come with the Amiga 'Class of 90's' Pack but we've managed to source a few and are able to offer them at the giveaway price of **£19.95**

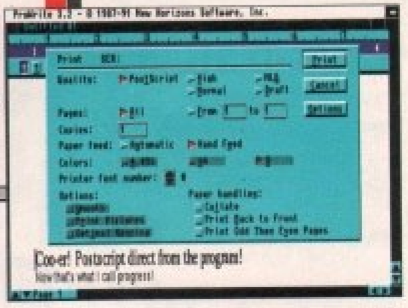
⁜ **N.B. This package is NOT Plus/A600 compatible**

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A collection of just some of the software the would-be businessman might find handy

Home and office

Job number one – buy a decent wordprocessor. Don't worry if this is the most expensive buy of the lot, because it's the one you'll depend on most.

My first choice would be Wordworth 1.1 from Digita International, but this program, though excellent in many ways, is unsuitable for some tasks.

If you want to generate invoices for example, Protext 5.02 has a line drawing function and more professional business features. Other choices would include Pen Pal with its DTP-like features and excellence! for its enormous dictionary (with definitions) and grammar checker.

Don't skimp on the wordprocessor and settle for KindWords 2 or a PD product. The former is very slow and the latter are almost always just tarted up text editors.

You could give ProWrite a closer look, though. This quality American wordsmith has never enjoyed the success it deserves in the UK, and has gone through an evolution over the last year to include direct PostScript support and an improved interface. With its recent price cut, it could be a real bargain.

Printing

A wordprocesor is useless without a printer, and it's at this stage that the budget begins to groan a bit. If you want a 24-pin printer, you'll have to settle for very cheap software as the cheapest 24-pin is still around £200.

However, if you're prepared to stick with 9-pin printers, there are bargains galore almost everywhere you look.

The latest price on the elderly Citizen 120, for instance, is about £115. This perfectly adequate printer will suffice for standard letters, and if you have a PostScript-compatible wordprocessor or one with an ultra-print option, even a basic 9-pin can produce the goods.

At this point, you'll notice that we're rapidly approaching the £200 mark, and will have surpassed it if you opted for one of the more expensive wordprocessors.

As we haven't considered databases or accounting packages yet, our chances of staying within budget don't at first look good.

However, if you bought the May issue of *Amiga Computing* you will already have a free copy of Superbase Personal, which can be upgraded to Personal 2 for only £19.99.

Superbase Personal (and Personal 2) is the ideal home office database, so there's no need to spend more than the upgrade fee, which I'd recommend if you are going to use the database for commercial purposes.

The only widely available alternative is Prodata from Arnor. This is an excellent product incorporating most of the features you'd need from a database, but it does have the drawback of not having been given away free, so unless you really don't like Superbase Personal, Prodata is unnecessary.

When it comes to spreadsheets, the Amiga owner has a lot less choice than the average PC owner. There are a few good ones around, but precious few good cheap ones.

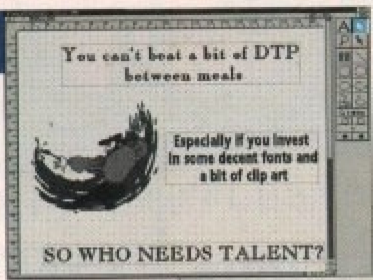
I'd go for DGCalc from Digita which, at £39.99, is good enough for basic business uses, or Advantage from Gold Disk.

The latter is only for those who haven't overspent on a wordprocessor, as it retails for approaching £90, but it is a solid product with some good options. The ability to read Lotus 1-2-3 files is a boon for anyone who works with a PC spreadsheet at the office, and I'd recommend Advantage if you fall into this category.

Our choice

Wordworth 1.1	£75
Citizen 120	£115
Superbase upgrade	£19.99
DGCalc	£39.99
TOTAL	**£249.98**

DTP



This is an area in which it is possible to start spending and never stop. There are so many aspects to DTP that it can encompass wordprocessors, art packages, image processors, and all sorts of hardware from a decent mouse to a laser printer.

Before going credit card crazy, however, it is possible to do a bit of judicious planning.

You'll definitely need three pieces of equipment – a DTP package, a hand scanner, and some extra RAM – but everything else is an optional extra.

Within the bounds of a £250 budget, DTP can be a very tricky purchasing decision, but there are at least two routes you can take.

The first is to go for a low-end DTP package such as Pagesetter 2 (the lowest practical level for a DTP package) which will save you money to spend on hardware.

By taking this approach, you can upgrade the software at a later date in the knowledge that your hardware will be able to keep.

Pagesetter 2 can be purchased for about £50 or less, so you will have £200 left for memory and a scanner. The only decent hand scanner at this level is the Power Computing mono-only 400dpi scanner whose greyscale images are of a very high quality. This retails for £99.

Memory

The only problem now is that you won't have enough for a good memory expansion card. A500 8Mb RAM expansions start at £119 for the 2Mb populated Ashcom AX502, so unless you're prepared to go over budget, a 1.5Mb card for £80 or a 1Mb card for A500 Plus owners at £50 might be a better buy.

The second route is to buy a good DTP package and 2Mb RAM, then spend money on having your photographs scanned at a local print bureau.

This is more expensive in the long run, but for semi-professional DTP where a publication will pay for itself or earn you money, the costs of production are bearable.

PageStream 2.2 can cost you as little as £156 if you probe our small ads, leaving £80 for a 1.5Mb RAM card and a bit over for some shareware PostScript fonts from EM Computergraphics or George Thompson Services.

You won't be able to do much complex DTP with 2 to 2.5Mb RAM but you can always decide to bust the budget and go for an 8Mb RAM box populated to 2Mb for later upgrading if you feel the need.

On the whole, if you have a simple task in mind for your DTP package and don't envisage going further up the quality scale, stick with Pagesetter 2 and the hand scanner.

If you're likely to need PostScript quality, and would like eventually to make money from DTP, buy one of the more expensive packages and an 8Mb RAM expansion.

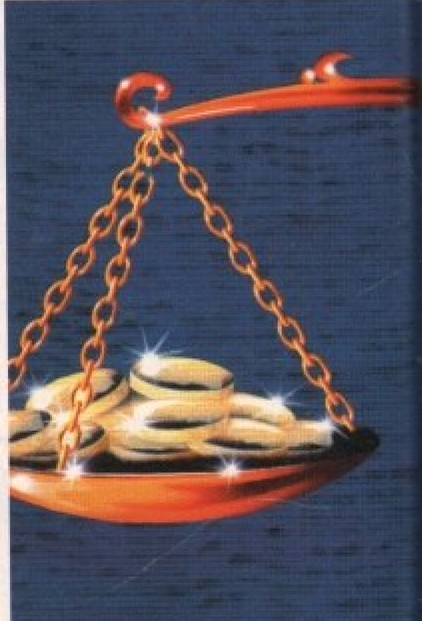
A close look at the artisticexploits of PageStream 2.2



If you are an Amiga owner with an interest in one specialist area, you might have come to the conclusion that to exploit your machine's potential properly you will have to mortgage the cat or sell an internal organ.

In this time of recession, however, price wars have become so vicious that for only £250 it is possible to build yourself a system capable of pretty serious productivity.

This is partly due to the machine's age. The Amiga has been around for long enough now that high quality software of a year or two ago can be picked up for a pittance, and competition in



Amiga Computing looks at five specialist areas and asks: "what can you get these days for £250?"

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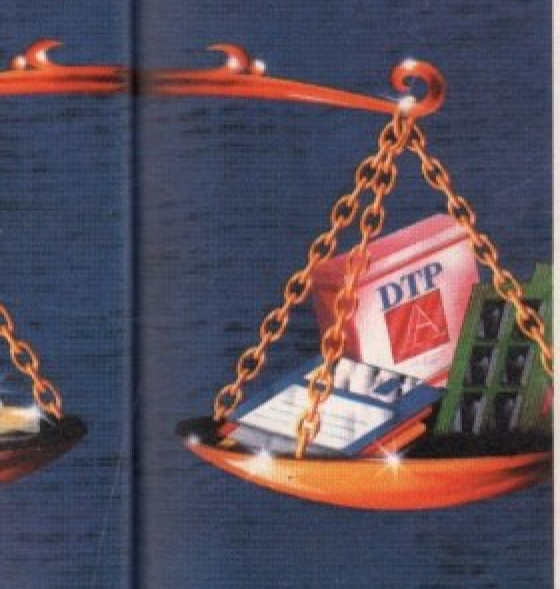
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the hardware market has ensured a steady supply of quality, affordable equipment.

There are now enough small manufacturers producing kit for a competitive market that prices have fallen to gratifyingly low levels.

In this article, we look at the five most common areas of Amiga productivity and cast around for a complete system under £250.

Music, art, video, DTP, and home and office areas come under the microscope, and for each we look at what is not only the most balanced and usable system, but also the best value for money.



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System specifics

Our choice

Amateur level	
Pagesetter 2	£49.99
Power Computing hand scanner	£99
1.5Mb RAM card	£80
Shareware font set	£12.50
PD clip art	£5
TOTAL	£246.49

Semi-Pro level	
PageStream 2.2	£156
1.5Mb RAM card	£80
Shareware font set	£12.50
TOTAL	£248.50

Art and animation

If you fancy yourself as something of an artist, the Amiga is the perfect platform, thanks not only to the machine's artistic features but also its accompanying bundled software, DPaintIII.

This package alone provides any would-be artist with an impressive head start in the artistic stakes. Having said that, any system builder would be well advised to invest his or her first £45 in the latest upgrade – v4.1 – which you'll find detailed in this month's Updates column.

The primary reason for doing this is the option to employ Ham in your creations. This is especially useful to any animators out there, as Ham is the only format which can achieve near photo-realistic quality and still produce full-screen images which animate at a reasonably fluid rate.

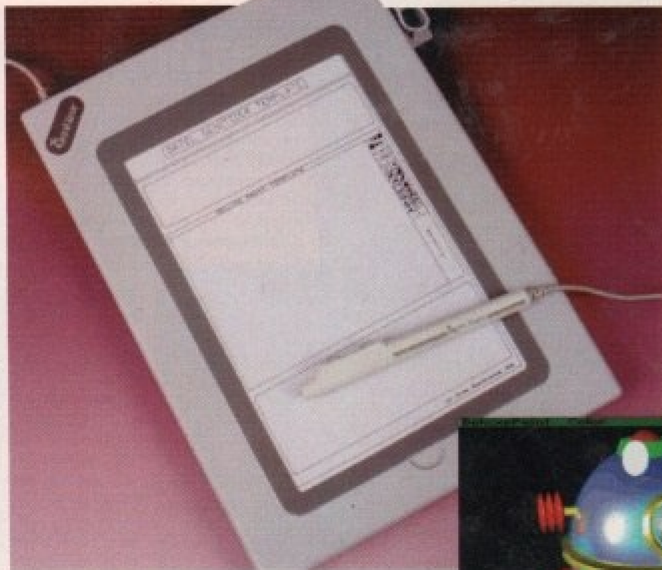
Purists

If you're a freehand artist struggling to come to terms with the dreaded mouse, there are a few alternatives. For the purists, Take 2 from Rombo could be the answer, as it allows the user to draw his or her creations freehand and then digitise the results directly into the Amiga.

For character animation, Take 2 is perhaps the perfect way around the somewhat tricky transition from freehand art to computer animation. However it does have its limitations, especially concerning flexibility.

Fortunately, if you want to retain your hard-earned freehand skills while taking advantage of the Amiga's vast array of the mouse-driven packages, both artistic and otherwise, a graphic tablet offers perhaps the perfect compromise.

It's true that the stylus of the average graphics tablet can't compete for feel when compared to pencil on paper, but it still offers a very palatable alternative and perhaps more importantly, a bridge between the world of the computer and that of the artist. The best bargain in this particular sphere has to be the Genitizer graphics tablet from Datel. The unit comes with a DPaintIII template as standard and boasts a 9 x 6in working area.



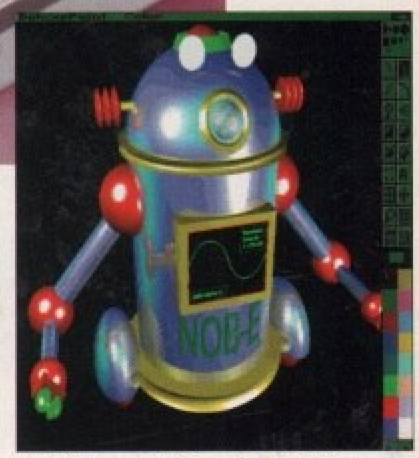
Bridging the gap between the physical and the virtual world, with Datel's excellent Genitizer graphics tablet

The final piece of the jigsaw is image processing. With the Amiga diversifying into all manner of applications, flexibility is almost as important as talent. As a consequence, the ability to tailor your art to suit a certain package or niche in the market is a near essential.

For the beginner on a budget, The Art Department is ideal. Although out-gunned by its later incarnation, The Art Department Professional, it still provides that vital first step into Image processing.

Our choice

DPaint 4.1	£45 (DPaintIII upgrade price)
Genitizer graphics tabletPrice	£129.99
The Art Department	£62.95
TOTAL	£237.94



Dpaint IV now with the added flexibility of HAM. Nob-E's never looked better

DTV

Aside from the obvious such as a camcorder, video or perhaps both, the only other thing an Amiga user needs to get into DTV is a copy of DPaint.

This is DTV in the raw, but for only a few hundred pounds you can build a dedicated system which will transform the amateur into the astonishing.

As mentioned earlier, DPaintIII – which most users already have – is one of the cornerstones of good DTV. Unlike the artists out there, it's not necessary for potential videophiles to upgrade to v4.1.

A copy of v3 with its animation options is probably as much as you'll ever need – unless of course you have access to a scanner and wish introduce stills from the real world into your creations.

Titling trio

The next essential investment is a titler. This is a tricky area as there are three contenders for the budget-title crown – The Big Alternative Scroller from Alternative Image, Home Titler from HB Marketing and Scala 500.

The latter of the three would be my personal choice as it offers a variety of intros and special effects that the others simply can't match.

In addition to any titler, a good selection of fonts is essential. As a result, a stroll through the PD section is in order. Almost all the larger libraries have a sizeable library of additional font disks, some of which are designed specifically for DTV applications.

Assuming you now have a copy of DPaint that supports animation, a titler and ➤



One of the top DTV power programs, and now available in its Scala 500 format every can get in on the act

Take a look towards the rear of the magazine and you'll find a brand new section entitled *Amiga Mart*.

In this section every month we plan to cover the best new releases, provide advice on the easiest routes to value for money (VFM), and list the best bargains we can find in the VFM Top Ten.

As a guide to the best budget buying, *Amiga Mart* is dedicated to readers with real-life wallets and realistic expectations for their machines.

For this reason, you'll find listings of a variety of hardware and software, and constant reminders of which are the best buys. Check it out now.



a selection of fonts, your basic DTV software collection is complete.

Now it's time to invest in a genlock. Although a rather intimidating title, a genlock in its basic form is a relatively simple unit which more than anything can transform your creations from the mediocre to the amazing.

Although there are a huge number of genlocks on the market, perhaps the best buy for anybody on a budget is the RocGen RG300C from Silica Systems. Retailing at just £99 – or less from third-party suppliers – it's an ideal intro level unit which offers an excellent ratio of quality to cost.

Although impressive it does have a few limitations, most infuriating of which is the lack of an RGB through-port. Another omission is "invert video", a feature which allows area masking using colour zero which can be adjusted via fading to produce blanked or semi-transparent areas on-screen.

For this particular feature, and RGB-through, you'll have to invest in a unit such as Power's Microgen, which offers both of the above but unfortunately retails at almost twice the price of the RocGen unit.

Audio is the final part of the equation. Don't make the mistake of considering video the all-important component of a production.

If you have good imagery and awful audio you'll sacrifice at least a third of the impact – especially on productions that would benefit from some form of background music.

However, if the audio matches the video the impact of an already graphically impressive show can be instantly tripled.

The cheapest and easiest way to combine audio from various sources is to pick up a basic four-channel mixer from Tandy. It will only set you back around £25 to £30 while adding immeasurably to your output.

Our choice

DPaint	£12.99
Scala 500	£89.95
RocGen	£99.99
Audio mixer	£30.00
TOTAL	**£232.89**

Amiga-based music

If you're planning to employ the Amiga as a sound generation source rather than merely a sequencing environment, by far the most important part of any setup is the sampler.

As a result, there's no point in cutting corners. Although there are more samplers about than fleas on a dog, my particular choice would be Sound Master which retails at a rather inflated £129.95. Fortunately the quality will soon help you forget the expense.

A welcome addition to the above is the inclusion of AudioMaster III, an award-winning package that has long been the favourite of all serious Amiga sampling fans.



An oldie bu a goodie, Rocgen has certainly been aroun the block b it's still goi strong

Once equipped with a Sound Master and its accompanying Audio MasterIII software, the next and equally important investment is a good quality microphone.

Here again don't be tempted to cut corners. The key to quality results is a high standard of raw materials. To achieve this a decent sampler and microphone combination is essential.

To that end, budget for at least a £50 investment on a quality omni-directional mike. Don't under any circumstances buy a condenser-style microphone as these are nowhere near as flexible.

For the best advice on a particular type of mike, take a trip and any advice on offer from your local music shop. And insist on a demonstration before you part with the cash!

Now you have the means to record and manipulate samples, it's time to breath life into your musical aspirations. Again the Amiga market is fit to burst with an assortment of "soundtracker clones" – a generic term for piano roll sample sequencers.



Teigo Kinnunen's OctaMed in all its glory, but its four track 3.2 version may be all you'll ever need

Fortunately this is an area whe you can actually save cash by investing in PD program entitled MED. MED is on a pa with any commercial sound trackers, but wi only set you back a fraction of the price.

The new eight-track version, entitle OctoMed, is available from Amiganut United for £15, but you should be able t pick up Med 3.2 – its four-track predecesso – for as little as £2 from any of the larger P emporiums.

The final, if slightly less essential, purchas is SuperJam, a program which allows you t convert samples to its own TurboSample fo mat and then have any one of the program six built-in musicians jam away in the style you choice.

For more details on SuperJam, dig out th March 92 issue of *AC*, and check out th *Wannabees in wonderland* feature on page 28.

Our choice

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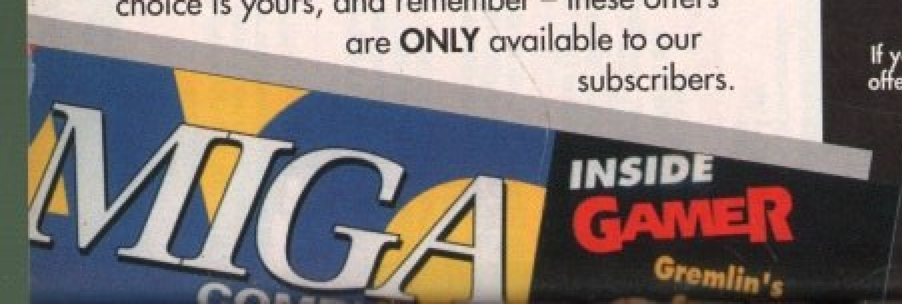
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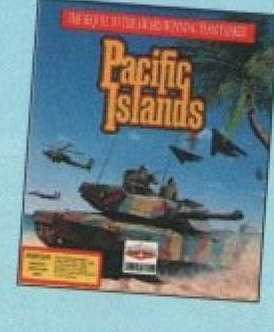
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There comes a time in every young man's life when his thoughts turn to the larger issues – Where are we going? Where are we from? What did we do with that flipping important address and phone number?

Databases loom large in the history of computing, and not a day goes by without someone popping the question "is it dBase compatible?" to their loved ones.

In the beginning was the word, and the word was dBase, a complex mass of commands and all the kind of hard-to-get-at trickery that keeps PC consultants in the manner to which they've become accustomed, and keeps beginners feeling like mushrooms, in the dark and up to their knees in manure.

But the Amiga is a friendlier beast than its PC counterparts, and the programs you'll get on the Amiga are much more user friendly and easy to grasp. Yes? Well on the whole no.

Except for the industry – standard Superbase Pro, very little has changed over the years. However, being the Amiga it's growing every day, and things are improving steadily, so let's open the cupboard under the stairs and see what's really growing in those old seed trays.

Gold Disk Office

(Gold Disk £129.99)

An integrated package with all the drawbacks and bonuses you get with any such package. It's perfect for the beginner, but it lacks any real punch. However, being a Gold Disk product it's certainly solid enough for most purposes, and like MSS Works! Platinum is an excellent intro into the various types of program it contains.

The database module, Office File, is limited in certain respects, although it does have some redeeming qualities. Data entry is simple and you can quickly and easily manipulate records with indexes, filters, sets, and reports of your own design. This means you can pretty much tailor the thing to your needs, and for a small and simple program this is very good.

One feature worth singling out is the QuickCalc feature which enables you to do statistical calculations on numeric fields in a range of records. You can do formula substitution too, which is a means of changing fields in multiple records based on a mathematical expression, a bit like a spreadsheet! Bizarre, but useful.

There are a number of presets for this process too, called Built-In Functions, which can be "applied right out of the box". Data can be shared with all the programs, and so you can load the data from your database into the graphs module and even output this as a ProDraw clip for pasting into ProPage documents.

All things considered, Gold Disk Office is the best intro package, and I'd rate it above Works as a beginners' program, simply because it's more Amiga-ised and less gawkily bolted together. Also Gold Disk are famous for going just that bit further to make sure that programs are pleasant to use and perform well, so the feel of the suite is that much more polished.

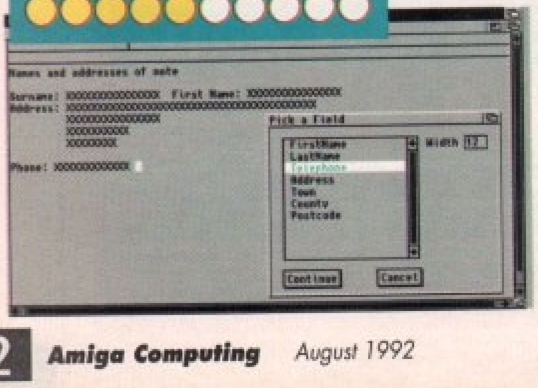
Ease of use
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Speed
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Compatibility
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Value for money
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Overall
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ImageFinder

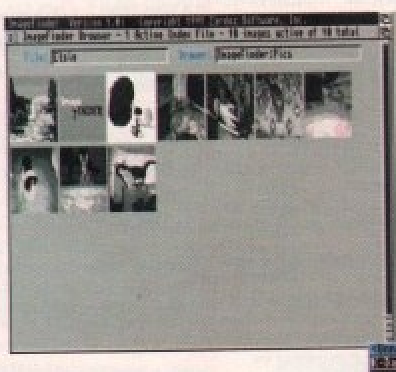
(Zardoz Software £59.99)

A neat idea and one which has taken its time coming along. ImageFinder is a picture database, in which you can file all your pictures, which if you're like me and have about 60 billion of the bloody things, you'll find it invaluable.

What it does is take the pictures from your disks and show them as a series of tiny black and white pictures on the screen, in any resolution from 24-bit down to 2-bit, and sort them in any way you choose. The trick is that if the picture is in the system you can click on the image to display it in full res. Obviously, the program will prompt you for the disk if you don't have it loaded. And no it can't tell you where you left the disk. Your filing is your own problem!

Not only does the system allow you to find the graphics you are seeking, it also holds a bunch of information about the screens too, like the title, the resolution, the depth in bits, the date and the size. You can search any of these fields for items with the same subject, if they are digitised or not, or even search for a bunch of pictures that are all 7,000 bytes in size.

The program is fully ARexx-compatible, and can even launch other programs and pass information and files to them down the pipe. If you work primarily with graphics, this will be more than valuable to you. Better than food, even.



Ease of use
●●●●●●○○○○

Speed
●●●●●○○○○○

Compatibility
●●○○○○○○○○

Value for money
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Overall
●●●●●●○○○○



The glamorous word of information management. Who said cross refereced double indexed auditing wasn't exciting...

K Data

(Kuma £49.95)

Kuma developed this program a while back as part of a range that included K Spread, the best selling spreadsheet. K Spread 4 is the bee's knees of the spread world, but unfortunately K Data hasn't been through that much revision or refinement.

OK, so it's an oldie but not bad for that. K Data's overhaul, long overdue, has been passed to a higher authority. Kuma have ceased to develop their range of p ductivity software (in favour of a popu range of books), and so another oldie goodie – Hisoft – have taken the se over.

Hisoft will be dealing with all Kum software, giving the programs a bit face-lift to match the current trend interfaces and techniques, and ensur WB2 compatibility.

K Data is part of this program, Hisoft are currently involved in upra and updating this age-old prog/ram bringing it into the 90s. The interfac being tickled for Release 2.0, and all bugs are being tracked down, stom and swept up.

Currently K Data is a fairly ordinary program which does the job but no m Obviously with Hisoft's programm muscle behind it propelling it along, can expect something a bit more rad the not too distant future.

Ease of use
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Speed
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Compatibility
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Value for money
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Overall
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Microfiche Fil

(Software Visions £3

The original idea of this program w be a sort of microfiche viewer on a puter, with digitised images taking place next to raw textual data o screen. Of course that was a bit of a mick really for what was just a nic and clever little database system.

You move the little white square top right-hand corner about on the

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Base instinct

Phil South looks at the field of Amiga databases and asks the question "can it hold all my records... or CDs even"?

ture version of your data, and just like a microfiche viewer the expanded view filling the left side of the screen moves about too. The system is what you might call flat file, with all the records laid out on one sheet. When the mouse is clicked on a certain entry on the main sheet, a box comes up showing you the full listing with all the fields displayed.

Although MFF has just about disappeared now, you may find it around in some places, and if you can get hold of it it's a bargain. A very useful base for addresses and phone numbers, although it lacks real meaty report formats which you might want for larger and more complex applications.

Ease of use
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Speed
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Compatibility
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Value for money
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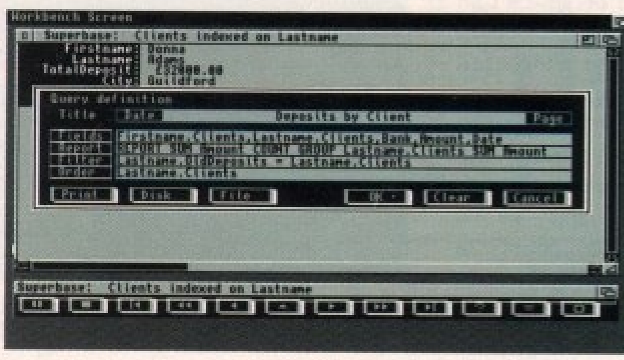
Works! Platinum Database
(MSS £89.95)

Released as part of the Works! Platinum Edition (a suite of programs covering all aspects of the productivity spectrum), the database module is a fairly new revision of a previous product called Organize! and although somewhat aged it has a number of very nice features, like 128 fields, 4.2 billion possible records, compatibility with dBase III file structures, as well as some extensive mathematical functions.

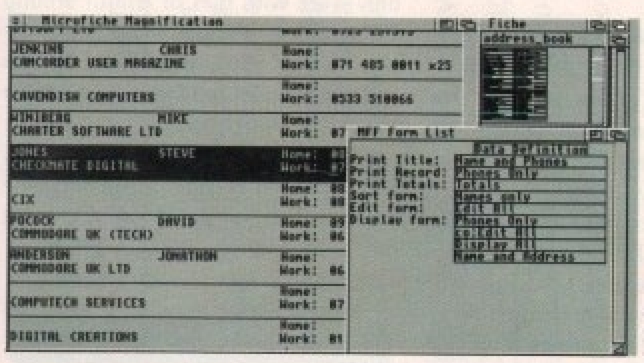
Not too shabby for a program of this size. Although not as meaty as Superbase, it does have a lot of features, and while not as fast it is certainly cheap. The suite approach to productivity software is good in one sense, in that it's a good (and very cheap) way to get up and running and find out which of the programs you really need. Once you've done that you can add a standalone program for each of the modules and then finally discard it.

Works! is pretty good overall, but the programs lack a little design or just plain oomph. I always prefer to use standalones myself, although a beginner would probably benefit from such an easy integrated approach. Check out the Gold Disk suite and see which one you like best, before you shell out on this one though.

Ease of use
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Speed
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Compatibility
●●●●●●●○○○
Value for money
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Overall
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Above: The familiar face of Superbase, which incidentally AC gabe away in its personal form back on the June issues



Microfiche Filer – gimmicky, but still a bargain if you can find it

Superbase Pofessional 4
(Oxxi £299)

This is the big one, really. The only consistently updated program in this area for the last five years, and certainly one of the most powerful if not *the* most. Superbase Pro is a tiny bit overpowered if you only have a list of a few names and addresses or 20 records or CDs. If you want to collate stock for an international company on an Amiga, however, this is the only program that will do it.

It has its own personal definition language called DML, although it reads and writes SQL (Standard Query Language, as used in mainframes and most high-end PC database packages) like it was a native, and it also loads a number of picture formats too, like GIF and PCX. The only thing it won't do is design your databases for you, which is the hard part.

The really hard part once you've been running Superbase Pro for a while is once you know all the capabilities you're a little bit spoiled for choice about how you create your databases. You can have simple text-only affairs, or you can make standalone databases for other people to use which have graphic screens with custom buttons and all manner of hypermedia-type effects and twiddles.

You can load, store, and retrieve "billions" of entries according to the blurb, although personally I've yet to input anywhere near even hundreds of entries. The performance is very good, but you can rest assured that you're paying for it through both nostrils.

The only black spot is that the printer support is Prefs only, which is OK for text but text with graphics... hmmm. This is one area that really should be looked at with perhaps special drivers being written to optimise the quality on even dot matrix printers.

Also, yes I know it's just dropped in price, and although some (especially Oxxi) would say you can't get this power for this price on any other machine, I'd say look again. Surely the R&D costs have been recovered by now, and many people would benefit from having a product like this at a more manageable price.

That minor niggle aside it has to be said clearly that SBPro is most definitely the industry standard, and it'll take a very big program indeed to knock it off that particular perch. The power of this program is intoxicating, and it makes all the ➤

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Filer
ns £30)

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Jargon buster

Card File: A database in which the records are stored as if they were cards in a card file, that is to say you see one card at a time in alphabetical order.

dBase: The PC program and format which dominates the field. If your program doesn't emulate or use this file format you could find yourself up the creek with out any toilet tissue.

Field: An area on the screen in a database program which can contain an item of data. Used for searches and comparisons of your data.

Flat File: The opposite of card file, where all records are stored on one big sheet.

Record: A page or an entry full of information in a database.

SQL: Standard Query Language - a special programming language used by dBase and others to facilitate the standardisation of the way packages produce, interrogate, and program their databases.

other contenders look very thin by comparison.

Ease of use
●●●●●●●○○○
Speed
●●●●●●●●●○
Compatibility
●●●●●●●●●○
Value for money
●●●●●●○○○○
Overall
●●●●●●●●●○

Superbase Personal 2

(Oxxi £69.99)

Personal says it all – it's a personal database system. Meant less for the likes of General Motors, more the likes of Gerry Morris.

This was what Superbase used to be like before it went professional and through four versions. The VCR controls are the same, although because it's an earlier and smaller program, it doesn't quite have the technical punch and sophistication of the bigger program.

Sure, this doesn't mean that it's less of a program for being more elementary, but before you decide on this baby as your data cruncher, you'll have to figure it – are you turning around a few hundred bits of data or several thousand? Is Personal going to croak before you've done the job, or is it going to cover your needs perfectly?

Don't get me wrong, it's a good solid program in its own right (you know that because you got 1.0 free on the cover of our May issue), but it's strictly for nickels and dimes data storage and retrieval. If you want a club database or a collection base of your videos, stamps or model cars, then this is perfect. If you find you need something a little more corporate and massive, then you may have to look at Superbase Pro 4. Sad but true.

Ease of use
●●●●●●●●○○
Speed
●●●●●○○○○○
Compatibility
●●●●○○○○○○
Value for money
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Overall
●●●●●●●●○○

And the winner is...

1. Superbase Pro 4

The all-round pro solution, top of the heap in facilities, price and power, with all the industry compatibility you could wish for. The Ferrari of databases. Power and price coming together with a hard slap.

2. Superbase Personal

If SBPro is a Ferrari, then Personal is a sort of TR7, a little bit class-free, but very quick on the straight. Looks like a real sports car, but isn't. Good handling and performance without the price.

3. Microfiche Filer

A classic car, not very sporty, but roomy, very good nick all round and gets you from A to B with a little bit of style. In need of some attention, especially in the interface department.

4. Image Finder

A stonking good kit car, with lots of good looks and power, but a bit of assembly is required to make it reach full potential. That is to say you have to load all your disks into it in order for it to know where things are.

5. Gold Disk Office

Puts me in mind of a pumped up Ford Fiesta XR2. Speed and flash all in a compact and versatile package, but slightly laddish and not really good at any one thing. For beginners only.

6. K Data

A Ford family saloon, and no mistake. The 90s model will be more streamlined and sporty looking, but underneath it's the same reliable but slightly limited model.

7. AmiBase Pro III

Cheap and quick like an old Capri. A bit flashy with its graphic interface and fast enough, but still hanging onto its roots, in the case in the public domain. And just like the Capri, a brand new version will be out soon.

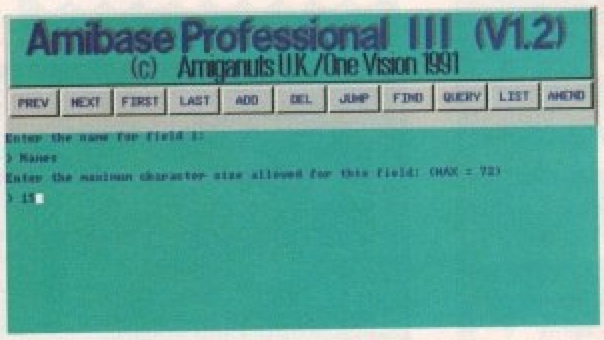
8. Works!

An all-terrain vehicle, four wheel drive look alike, jack of all trades and master of none. A bit funny looking on the road, but bags of scope. Pay out for the real thing when you find out which job you like the best.

Summary

There's not much of a race on here, with Superbase coming out ahead by several car lengths every time. Nobody else is trying very hard to emulate their success on the grid, and most of the other contenders are either in the pits or soon to be out of the race.

Some budget models are worth a look, but first you must decide what you want the package for. Just nipping down to Sainsburys on Saturday, or burning up the strip down in St. Tropez?



Amibase Professional III, previously a PD package in tis earlier days, but now one of the cheapest ways of getting into IT.

AmiBase Pro III

(Amiganuts £10)

AmiBase Pro started life as a PD program, and this shows a little in the slightly flashy design. The quality of the program is another thing, and although written in compiled Amos it's actually very good. Again, you should have had a taste of this when version 2 was released on our CoverDisk a few months back.

Using the program is easy, navigating around it using a series of buttons on the screen, supplemented by a series of drop down menus for some of the more complex functions.

The support disk comes with a group of utility programs which perform tasks like formatting a special data disk for your data, and version 1.2 of the program has two more programs than previous versions.

These programs are called MemDel and MemSort, and they are for people with very large files, who find the built-in "delete records" and "sort records" functions are too slow.

They work by loading the data file into memory, doing the deleting or sorting required, and then re-saving back to disk again. It's said you'll notice a significant difference in speed. These programs will only work with files of length around 2,500 records, although moves are under way to deal with larger files, and an updated MemDel and MemSort should be available in 1.4 very soon.

For the price you'd be hard pressed to find something as good. So it's not dBase compatible, but what do you want for a few quid, flippin Superbase? AC

Ease of use
●●●●●●○○○○
Speed
●●●●○○○○○○
Compatibility
●○○○○○○○○○
Value for money
●●●●●●●●●●
Overall
●●●●●○○○○○

Product Information

Gold Disk Office and Imagefinder are from:
Meridian
Tel: 081-543 3500

All Kuma products are available from:
Hisoft
The Old School Greenfield
Bedford
MK45 5DE
Tel: 0525 718181

Superbase products for Amiga are from:
Oxxi/Aegis
171 Bath Road
Slough SL1 4AA
Tel: 0753 551777

AmiBase III is licenseware from
Amiganuts United
169 Dale Valley Road
Hollybrook
Southampton
SQ1 6QX
Fax: 0703 785680

Try WorkBench 2.0, It's well worth the upgrade.

Hardware

Programing

Graphics

Graphics - 24 Bit cards for everybody

Avideo 24 bit graphics from Archos!

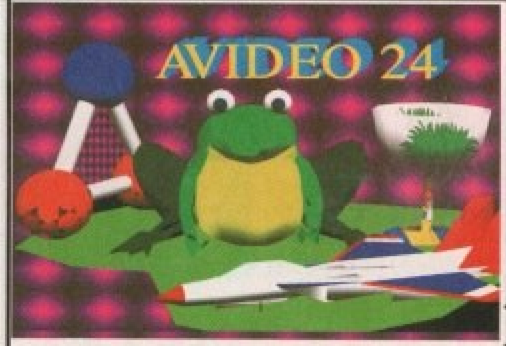
What other card could compete with the AVideo even if the AVideo 24 card was over £1000.

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Full 16.8 million RGB colours on screen at once.
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High speed HiRes 12 bit Animation upto 18 fps.
Includes the Amazing TVPaint 1.7

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PIP 24bit



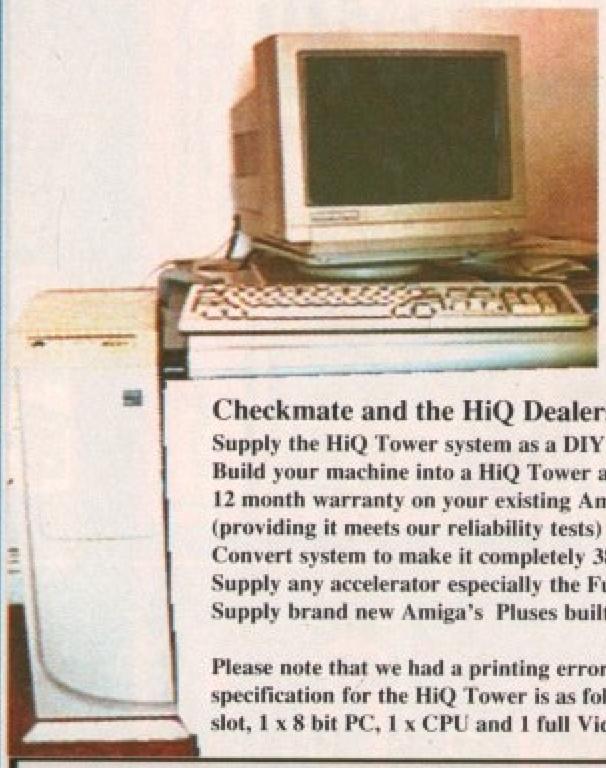
Only £ 599.00

A1500



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The original maverick Amiga product is still available and is being improved all the time. We try to stop making them but our customers just won't let us. It accepts 68040/030/020 cards, flicker fixers, Avideo 24, hard drives and floppies etc. And still starts at only £199.00

HiQ 68040 Power System



The HiQ Tower can now be purchased from Checkmate Digital direct or through a dedicated and growing Value added dealer network who aim to provide the very best in backup. Due to demand outstripping supply, advertising will be held back for this month, we will however have a list of your local dealers hopefully next month.

HiQ Tower for the Amiga A500 options:

Checkmate and the HiQ Dealers offer the following:-

Supply the HiQ Tower system as a DIY kit	£ 449.00
Build your machine into a HiQ Tower and give a 12 month warranty on your existing Amiga, (providing it meets our reliability tests)	£ 499.00
Convert system to make it completely 386SX compatible.	call now!
Supply any accelerator especially the Fusion 040 system.	
Supply brand new Amiga's Pluses built into HiQ Tower	£ 799.00
Limited Stock of A500 pluses	

Please note that we had a printing error in the last couple of adverts, the specification for the HiQ Tower is as follows:- 4 x B2000, 1 x 16 bit PC slot, 1 x 8 bit PC, 1 x CPU and 1 full Video slot. Sorry for the error.

Hardware best prices



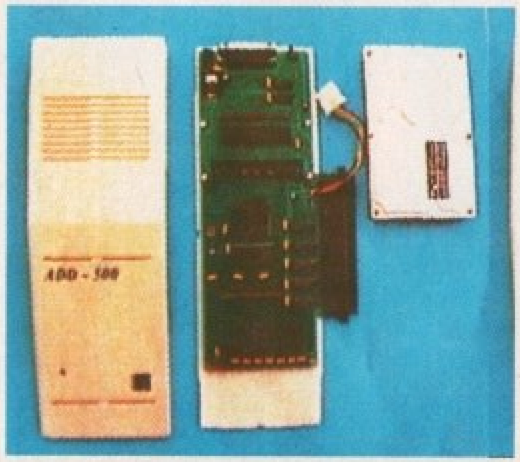
Fusion Forty 68040 accelerator, for the Amiga A2000/A1500 or A500 with HiQ Tower. This card gives about a 35 times speed increase and just under 20 Mips. Card is sold without ram (fit upto 32mb) Now supports 16 bit ram and TVPaint 1.7

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MEGA GAMES PACK

New Amiga 600

MEGA GAMES PACKS

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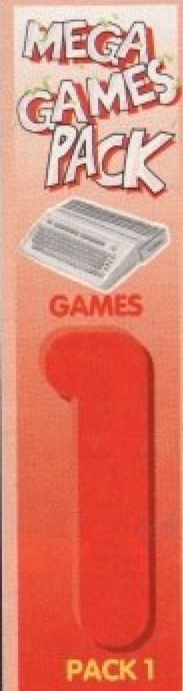
A600FD

1 Mb. Disk Drive, 1Mb RAM, Integral TV Modulator, 4096 Colours, Multi Tasking, Speech Synthesis, 4 Channel Digital Stereo Sound, Mouse. Workbench Disks & Manuals, ALL Connecting Cables, One Great Game from Commodore & Deluxe Paint III

A600HD

Spec. as above but with a 20 Mb. Hard Drive fitted. PLEASE NOTE... Neither the Commodore Game or Deluxe Paint III are included with the A600HD





GAMES PACK

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- **DELUXE PAINT III** [Supplied with A600FD ONLY not A600HD's]
- **TAILORED DUST COVER AND MOUSE MAT**
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TINTIN ON THE MOON - We've been captured by Colonel Jorgen and he's tring to scupper the moon mission. Come on Tintin, you're the only one who can save us, and be the first on the moon
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XENON 2 MEGABLAST - This time it's war! The Xenites are back and have thrown time itself into turmoil.

We reserve the right to substitute individual software titles or pack items should the need arise.

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A600FD PACK Priced at an INCREDIBLE

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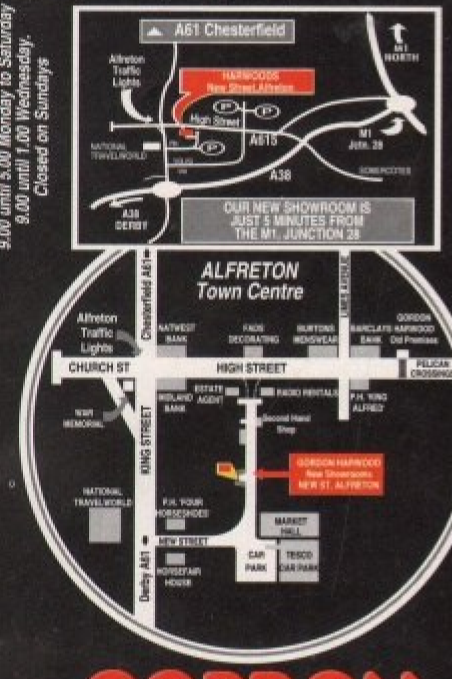
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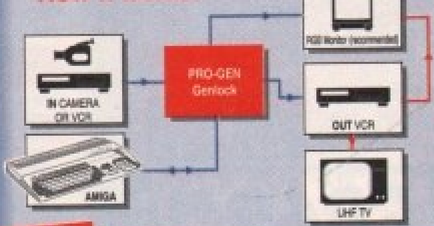
PRO-GEN Amiga Genlock

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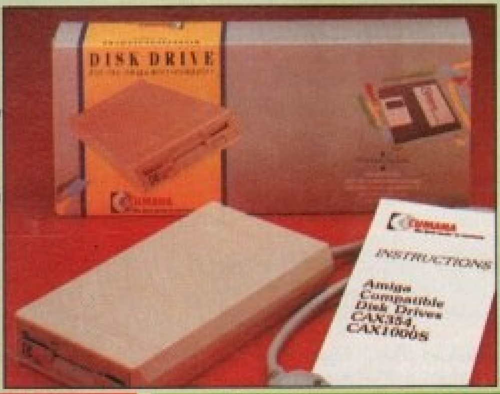
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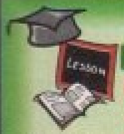
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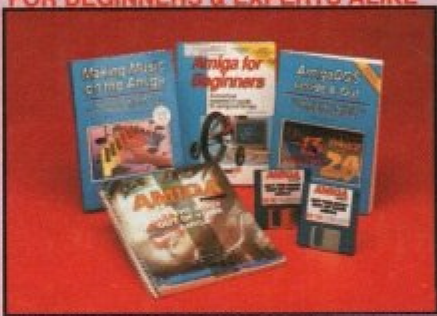


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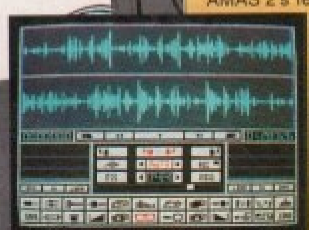
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SAMPLE: A sound that has been loaded into a computer and is represented by numbers (digital) rather than noises (analogue).
SAMPLER: Usually a small cartridge that allows you to take sounds from a microphone (with amplification), tape, CD etc and record (digitize) them into your computers memory. Once in the memory a sample (sound) can be changed using the sampling software.
SAMPLING SOFTWARE: Allows you to alter sounds that have been digitized by the SAMPLER. Normal functions with sampling software include loading and saving a sample disk, altering the sample by cutting, speeding up/down, fading in/out, joining to other samples and much much more.
SEQUENCER: Allows you to take samples and play them back in an order (sequence) that you determine. For example if you sampled a piano note, a sequencer would allow you to play that note back at different pitches and in a sequence you decide. Your one note loaded into a sequencer can become a complete piece of piano music.
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ABSOLUTE beginners

PART 6

Stevie Kennedy builds a better startup-sequence

So far in the beginners' series we have built an auto-booting disk (MyDisk) from the ground up, equipped it with a Shell so we can talk to it, and the correct files to enable simple printing to take place. It's now time to go back to the startup-sequence and fill it out a bit.

We left MyDisk's startup-sequence in a pretty sorry state last time we visited it. It has the bare files needed to load Workbench and set up Shell, but that's all. However, there are several vital commands we haven't yet added, without which our disk would be in trouble.

This month, we'll pad out the startup-sequence and find out just what some of those more exotic-sounding commands do.

The first addition is Setpatch, which should always be right at the beginning of any startup-sequence. This command is designed to "patch" certain parts of the Kickstart ROM, which means it modifies the operating system in RAM.

Some of the modifications are bug fixes, others are minor tweaks and your disk will still work without them, but for compatibility with all properly coded programs Setpatch should always be run.

One annoying feature of the Setpatch command is that it splurges a long list of patch reports to the screen when run, so to avoid our startup becoming untidy, we'll use redirection to steer this output away from the screen.

As mentioned in previous columns, redirection is the technique whereby output from a program or command is sent to a device other than its default.

Most AmigaDOS commands default to the screen, but others will send output to the printer and so on. Using the redirection symbols < and > we can send it anywhere we please, but as we just want to get rid of the Setpatch output without having to see it, we'll send it to the Amiga's version of limbo – the NIL: device.

This is just another way of telling the Amiga to scrap something – the device doesn't exist as such – so fire up ED and add the following command to the start of MyDisk's startup-sequence:

```
SETPATCH >NIL:
```

Of course, Setpatch isn't on our disk as yet, so open Shell and type:

```
COPY C:SETPATCH TO MYDISK:C
```

to avoid all of those nasty "unknown command" headaches.

The next command, Setmap, requires a bit more setting up. This command is used to impose a software "keymap" on the keyboard so that it responds correctly for the country in which the Amiga is being used and the layout of the keyboard itself.

Without a British keymap, you will have to search around the keyboard for certain symbols. For example, the hash mark "#" suddenly appears where the pound sign should be, and the pound sign itself becomes very elusive.

Keymaps need their own special directory in the DEVS: drawer, so type the commands:

```
MAKEDIR MYDISK:DEVS/KEYMAPS
COPY DEVS:KEYMAPS/GB TO MYDISK:DEVS/KEYMAPS
```

to set up the GB keymap on your disk. You will also need the Setmap command, which usually resides in the System drawer, so type:

```
COPY SYS:SYSTEM/SETMAP#? TO MYDISK:SYSTEM
```

Notice the funny #? symbols we used above? These constitute the AmigaDOS "wildcard". A wildcard makes it possible to type in a filename then tell the Amiga to ignore files with the same extra characters.

The wildcard can be treated as any number of extra characters, so in the example above the file Setmap.info is copied across as well.

The startup-sequence entry to enable our keymap is simply:

```
SYS:SYSTEM/SETMAP GB
```

which you should insert after the line containing the Setpatch command. You don't need to tell the Amiga where the keymap file is kept, because it knows to look in the DEVS:KEYMAPS/ directory.

If it doesn't find the keymap it's looking for it will tell you, but as long as you've followed the column so far this won't happen.

Another standard command you will find in the vast majority of startup-sequences is the Addbuffers command.

This is used to set aside blocks of memory to act as a RAM cache for your floppy or hard drives, thus speeding up read/write operations. It is always a good idea to use addbuffers where disk space and memory permits, so we'll add it now.

Add the following line just below the Setmap command in your startup-sequence:

```
ADDBUFFERS >NIL: DF0: 10
```

This simply tells the Amiga to add ten buffers to the internal drive, which will use 5k RAM (512 bytes per buffer), and instructs it not to bother us with a report.

You can add lots more buffers if you want, but anything more than about 20 will have little effect other than to eat up more memory.

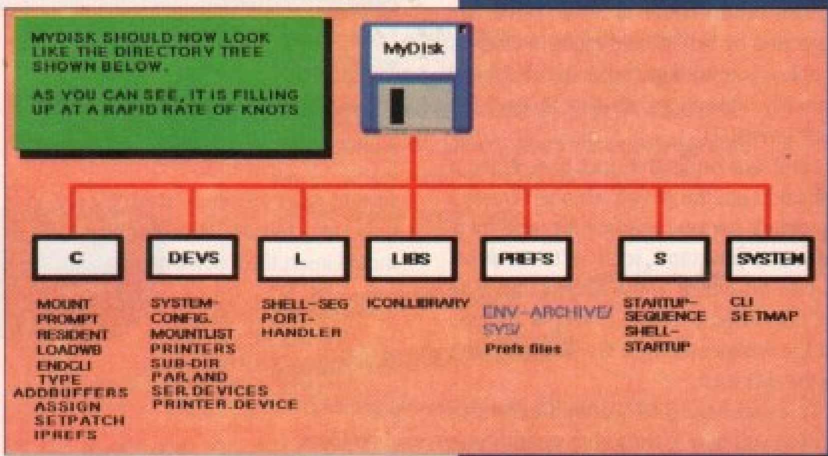
To put the Addbuffers command in our C: directory, just type:

```
COPY C:ADDBUFFERS TO MYDISK:C
```

and now every time MyDisk boots up, the internal drive will have a little more breathing space.

On to the next addition. Failat is a strange command in that it allows the user to tell the Amiga when to drop dead. An AmigaDOS script such as our startup sequence will execute until it reaches a line containing an instruction it cannot properly carry out for one reason or another. In these ➤

MyDisk is beginning to look a bit crowded, but there's still plenty of space for more programs



This month's jargon

Error return codes

These codes, ranging from five to over 30, report the severity of any errors which have occurred in a script file. The boobie I made a couple of months ago will have made you all familiar with the message:

```
LOADWB FAILED RETURN CODE 20
```

which is just the Amiga's way of saying that the return code indicates that the error was sufficiently serious to halt boot-up.

Note that if you had used the command:

```
FAILAT 21
```

before the LoadWB command, the script would have attempted to carry on executing.

Multiple argument parsing

This is a very techie jargon term given to many Workbench 2.04 commands' ability to carry out their function more than once with the same command. This means that you can type:

```
DELETE FILE1 FILE2 FILE3 ... and so on
```

rather than type DELETE three times with the separate file names.

ABSOLUTE beginners

cases, an error "return code" is generated.

These can vary in severity, but normally a return code of 10 will cause an alert, with the script continuing to execute, and a return code of 20 will stop the script in its tracks.

When we have a very long script it is usually a good idea to raise the Failat level to a point where even if something drastic goes wrong the remainder of the script will execute and leave us to fix the problem afterwards.

The command used in this case is:

```
FAILAT 21
```

which sets the fail level above the usual drop dead 20 barrier. Add this line below the Addbuffers command in your startup-sequence. It is possible to set the Failat level to above 30, but this is not a good idea.

Error return codes of 30 and over are generated by very serious faults in a script, so unless you want a script to run wild until manually broken into, it's best to leave the Failat level at 21.

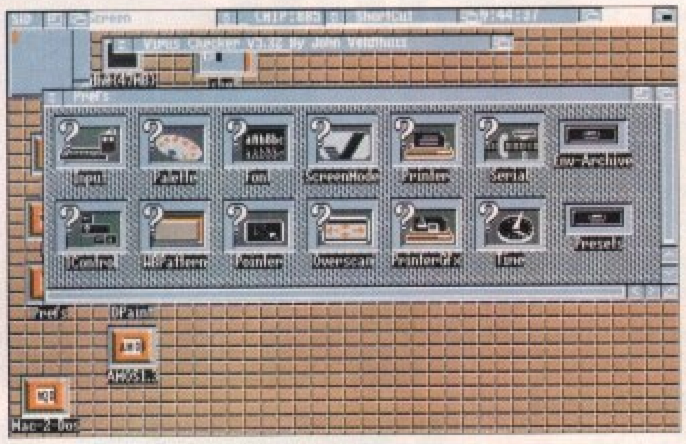
Let's race on to the next one. When a disk boots up, the Amiga will often create a temporary startup-sequence file, and there are many programs such as text editors and so on which will do the same. The directory used is called T: and unless you tell the Amiga otherwise it will look for this on the disk itself.

To avoid having temporary files written to what you may in the future want to be a write-protected disk, or to help avoid a disk being cluttered up with unwanted files, we create a T directory in RAM and use an Assign command to redirect all temporary files to it.

First, copy Assign to MyDisk using the command:

```
COPY C:ASSIGN TO MYDISK:C
```

The lines we'll need in our startup-



The Workbench prefs drawer, where those all-important Env-Archive files are situated

sequence are:

```
MAKEDIR RAM:T
ASSIGN T: RAM:T
```

so add these to your startup-sequence now. In addition, Workbench 1.3 users should insert the following lines:

```
MAKEDIR RAM:ENV
ASSIGN ENV: RAM:ENV
MAKEDIR RAM:CLIPBOARDS
ASSIGN CLIPS: RAM:CLIPBOARDS
```

and Workbench 2.04 users should edit the original two lines to read:

```
MAKEDIR RAM:T RAM:ENV RAM:ENV/SYS
RAM:CLIPBOARDS
COPY >NIL: ENVARC: RAM:ENV ALL QUIT NOREQ
ASSIGN T: RAM:T
ASSIGN ENV: RAM:ENV
ASSIGN CLIPS: RAM:CLIPBOARDS
```

Notice that the Makedir command under Workbench 2.04 can be made to create several directories with one command. This is called "multiple argument parsing" and is a handy feature of many commands in Workbench 2.04.

The above blarb has probably given you some food for thought, but what we have done is really quite simple. We have set up a temporary directory in RAM which we've made the Amiga use by assigning it the logical name T:, and we've set up two other directories called ENV: and CLIPS:.

Don't worry about CLIPS: for now, as it is usually only used by the Clipboard.device, which we don't have on the disk yet. The ENV: directory, however, is much more important. This is where "environment variables" are stored for use by AmigaDOS, and under Workbench 2.04 it is where the Workbench prefs files are kept.

A prefs file under Workbench 2.04 is generated by each of the programs you find in the Workbench prefs drawer, and at first will contain the default settings.

As soon as you change, say, the colour scheme and select Save, the new prefs file is saved in the Prefs/Env-Archive/Sys drawer ready to be loaded up next time you boot.

In other words, when you change your Workbench pattern, palette, font, or just about anything else, the new defaults are written to disk, but they are not used when you reboot unless copied to the ENV:SYS directory in RAM by your startup-sequence.

The directory from which your prefs files will be copied when a 2.04 disk boots up is ENVARC:, which is AmigaDOS's logical device name for the drawer on your disk in which they have a permanent home.

To ensure that this directory exists, type the following lines:

```
MAKEDIR MYDISK:PREFS
MAKEDIR MYDISK:PREFS/ENV-ARCHIVE
MAKEDIR MYDISK:PREFS/ENV-ARCHIVE/SYS
COPY ENVARC:SYS TO MYDISK:PREFS/ENV-
ARCHIVE/SYS ALL
```

This will create the relevant prefs and env-archive drawers, then copy all your own Workbench prefs files across to MyDisk. If you have never changed the standard preferences settings for Workbench, don't worry as the default settings are saved on disk in any case and will be copied to MyDisk instead.

There's one other file Workbench 2.04 which users will need in relation to the prefs settings. IPrefs is the command used to read all the prefs files and pass the information to Workbench and it should be included in the startup-sequence right after the line copying ENVARC: files to RAM:ENV.

To do this, first copy IPrefs to MyDisk with the command:

```
COPY C:IPREFS TO MYDISK:C
```

then edit your startup-sequence to include the simple line:

```
IPREFS
```

after the COPY ENVARC: line. IPrefs will launch itself, run in the background and keep track of any prefs changes made. It will then pass any changes made by the user through the prefs programs to Workbench, and reset Workbench if necessary when a change is made.

OK, let's take a breather and look back over what we've accomplished. The MyDisk startup-sequence was a fairly diminutive little chap until this month and, although it was sufficient to enable auto-booting, it failed to carry out several more or less important startup jobs.

We first of all made sure that Setpatch was run to keep our house in order, then used Setmap to force the keyboard into British mode.

At the same time, we found out what redirection does and added some memory buffers to the internal drive, thus making it work faster and smoother. So far so good.

Stickier

Next, though, things started to get a little stickier. If you feel confused about anything we've covered from Failat onwards, just sit back and chew it over for a couple of minutes.

The Failat command and our brief look at error return codes shouldn't provide too many difficulties, but the hefty amount of directory building to enable a T: directory and to copy the Env-Archive files to MyDisk could easily be confusing.

I'm afraid there's not much we can do about this for now. With a sound – if painfully gathered – base of knowledge on the sort of well hidden operations we've discussed this month, you will be much more able to deal with seemingly random crashes, freezes, or error messages.

In a similar vein, we'll look next month at the most common error messages you will encounter, what usually causes them, and how to get around them. Until then, may your Amiga be free from the little so-and-sos.

AC

This month's commands

We've covered the following commands this month:

ADDBUFFERS, SETPATCH, SETMAP, FAILAT, ASSIGN, and IPREFS

Their usage should have been sufficiently explained in the column, but we will be returning to some of them over the next few months, so watch out for more detailed explanations as we go along.

COPY with arguments

The Copy command we used in our startup-sequence this month went something like:

```
COPY (files) ALL QUIET NOREQ
```

The arguments attached to the command tell it to copy all the files in the indicated directory, to do so without reporting to the screen every time a file is copied, and not to show a file requester if a file cannot be found.

Most AmigaDOS commands have several optional arguments which can be used to make the command more flexible or powerful, and we'll be looking at them as we need them.

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Wall breaker



Enjoy the frantic action of Ronnie Simpson's arcade classic complete with its own level designer

Arcadia, or Arkanoid, or Breakout (the game has had many names and variants), is one of the all-time classics, and a direct ancestor of modern puzzle arcade games such as Tetris.

The object of the game, for the dozen or so inhabitants of the planet who don't already know, is to clear a screen of bricks using a paddle and a ball.

When the game starts you will be presented with the simple first screen showing a plain wall of bricks, at the bottom of which will be your paddle and a ball. Move the paddle from side to side with the mouse, and click the left button to release the ball and start the game.

The ball will fly at an angle towards the bricks, removing the one it hits, then bounce back towards the bottom of the screen.

Your task is to intercept it with the paddle and send it bouncing back up again before it goes out of play. Fail to do so and you lose one of your five balls, and when all of them have gone the game is over.

The screens become progressively harder as the game goes on, with bricks appearing closer to your paddle, making it harder to react to the bounce of the ball, and there are some bricks which take two or more hits to remove.

To complicate things a little more, there are power-ups to collect and a couple of mobile obstacles to avoid.

The simplest of these are the balloons, which just float around until the ball or paddle hits and destroys them. However, they can be a real pain when they unexpectedly deflect a ball so that it goes out of play.

Disastrous

The other, more dangerous hazards are the stars which when they hit your paddle freeze it for a couple of seconds. This can be disastrous when you're rushing across the screen to catch a speeding ball.

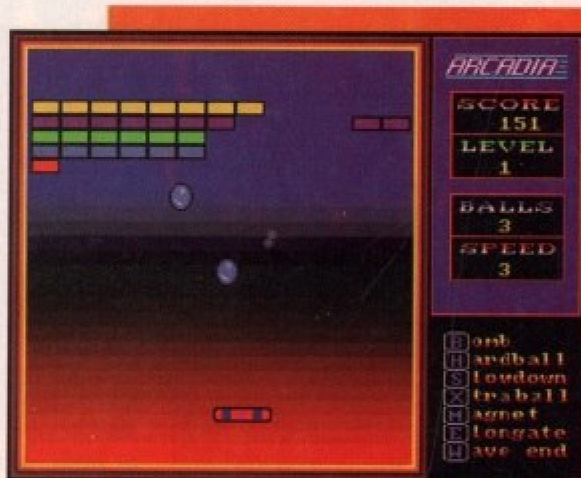
Power-ups come in seven flavours – Bomb, Hardball, Slow down, Extra ball, Magnet, Elongate, and Wave end. Bomb will remove all balloons on-screen when it is collected, Hardball turns your ball into a small red dot which ploughs through everything it touches, Slow down reduces the speed of the ball, Extra ball does what it says, Magnet makes the ball stick to your paddle, Elongate gives you a double width paddle, and Wave end clears the screen and takes you to the next level.

All power-ups appear in random positions and float down the screen, so all you have to do to collect them is touch them with the paddle before they disappear at the bottom. Remember that any active power-up is cancelled by another, so if you have something handy like Hardball active it's probably best to give, say, Slow down a miss.

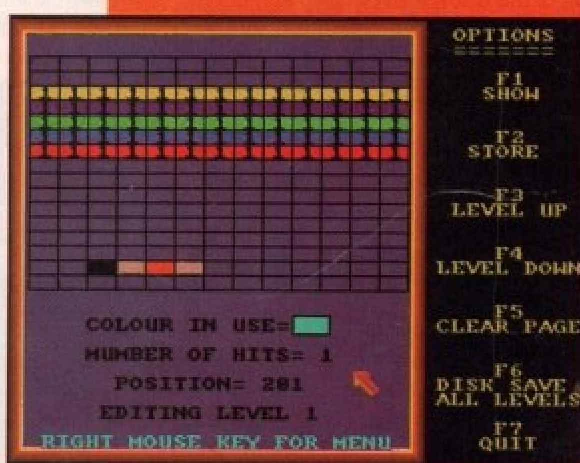
The level designer is used to create your own custom games, and by using it you can create levels with bricks laid out in any pattern.

Designing your own levels is a breeze, controlled by simple mouse clicks to place the bricks, and there are only two menu selections, one each for colour and brick value.

The right-hand side of the screen has a list of function key controls for loading, saving, and moving through the levels, so you shouldn't need instructions other than to remember to store a level (F2) before saving it to disk.



The first screen. Looks easier than it is.



Design your own custom levels



Balloons can deflect your ball in unpredictable ways



FileOFax

Author: Chris Pettet

From the same author as The Directory Manager (TDM), FileOFax is a program for storing names, telephone numbers, and diary dates on disk in much the same way as the paper-bound original.

The program comes in two parts – the FileOFax itself (not to be confused with the trademarked FiloFax), and the FileOFax reminder.

The first is a calendar and diary program which is used to collect phone numbers, set up events you want to be reminded of, and so on, and the latter is run at the start of every day from your system disk or hard drive.

When FOFReminder is run, it looks for a directory called FOFdata: which contains all recorded events, then decides whether you should be alerted to them.

Alerts are determined by the advance warning period decided upon when the events were set up in FileOFax, so if you had decided that you needed two weeks' warning of your mother's birthday and that happened to be two weeks from now, FOFReminder would kick up with an alert.

The only problem with FOFReminder is that it makes a lot of disk accesses. You can get around this in your startup sequence by copying your data and event files to RAM: at the beginning of the day, but if this is too much hassle for you, you can just allow the program to check for today's events once, then click on the FOFReminder window and press Escape to exit the program.

To get started, load up FileOFax, which will only work if you have booted from the CoverDisk or manually typed in the line:

```
ASSIGN FOFDATA: COVERDISK34:UTILITIES/FILEOFAX/FOFDATA
```

The screen will open with a calendar representation of the current month, which should be accurate as long as you have a battery backed-up clock. This means A500 Plus/A1500/A2000/A3000 owners, and those who have upgraded their A500s with 512k plus clock will be OK. Owners of unexpanded A500s and those with the new A600 will have to forego the benefits of FileOFax or buy the appropriate RAM upgrade with clock.

To move around the calendar on FileOFax, select Calendar Set from the menus or press Right Amiga-C. This will bring up a calendar screen with year entries going all the way to 2027 and a list of the 12 months in the year.

Clicking on the appropriate month and year, then on OKAY will return you to the main screen where your month will be displayed.

Entering and editing events – diary dates to you and me – is just as easy. Click in the box for the event's date, then simply select New from the Events menu and a requester will pop up asking for details of the diary date you wish to keep an eye on.

If you choose a date that has already gone by, FileOFax will say so and refuse to keep a note of the event.

As long as you're on the right day, you should be faced with a requester which allows you to note if the event is social, business, or other, what time of day it will be happening, and presents you with a single line text box for entering a brief note on what you should be doing.

There isn't a lot of space for long notes, but there's plenty for events like "Take the dog to the vets" or "Next issue of *Amiga Computing* out today".

Once you're happy with it, the event can be saved to disk by clicking on OKAY, or you can choose to repeat it using the REPEAT gadget.

Regular

This handy function gives you the option to repeat the same event at regular intervals, making the recording of birthdays, anniversaries, and monthly events very easy.

To increase or decrease the intervals at which you'd like an event to be repeated, press the + and - keys rather than click on the gadget. You should then be able to set the interval in numbers of weeks, monthly, or yearly, and decide on the number of repetitions.

A second function of the main FileOFax program is the storing of phone numbers. To add a number to the list, select Add Number from the Phonelist menu, at which point you just type in the number and name of person or business to whom it belongs.

Deleting numbers is fairly self-explanatory, but searching for them is just a bit clever. The search routine will find approximate matches for whatever you type as a search string, so it doesn't matter if you type a person's name in capitals, nor whether you give the full name.

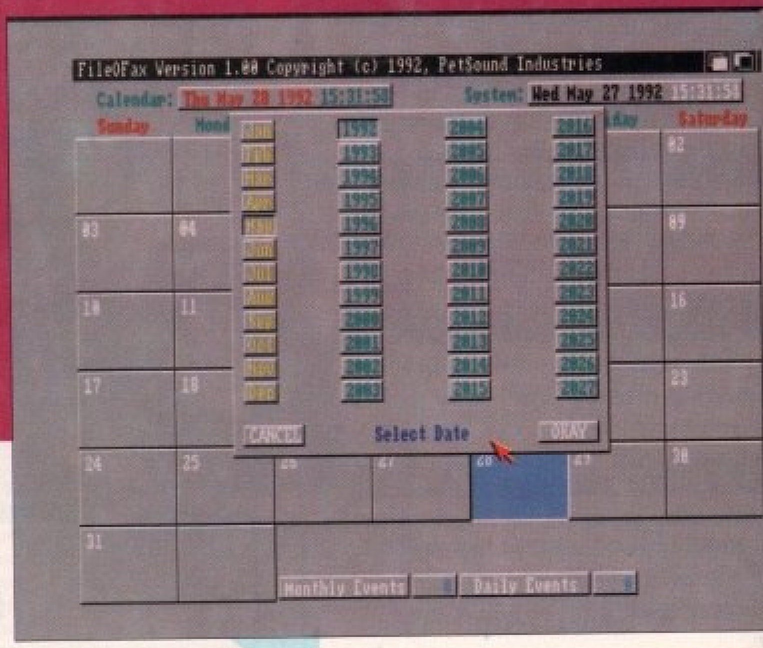
For instance, searching for Higginbottom Arthleboggle's number should not be the typing nightmare it at first looks to be, as "Higginb" should be a close enough match.

The program's final function is the Jobs To Do list where the user can make a note of all those little jobs which really must be done.

The list isn't alarm related, it's more of a simple notepad where you can jot down anything you'd rather not forget, but in the unregistered version, most of the space is taken up by Chris Pettet's reminder for you to register as a shareware user.

This, of course, is the first job for anyone making full use of a shareware program, so select List Jobs, make a note of Chris's address, and get those fivers in the post.

The calendar goes up to 2027, which should be adequate



Nclick

Author: Eric C Quackenbush

NClick is one of those common or garden anti-click utilities which are supposed to stop your drives making that annoying clicking sound when empty. The difference with this one is that it actually works.

To activate it, just type:

```
CD UTILITIES/NCLICK2

NCLICK ?
```

and the clicking sound will be turned off in all your floppy drives. To turn the click back on, type:

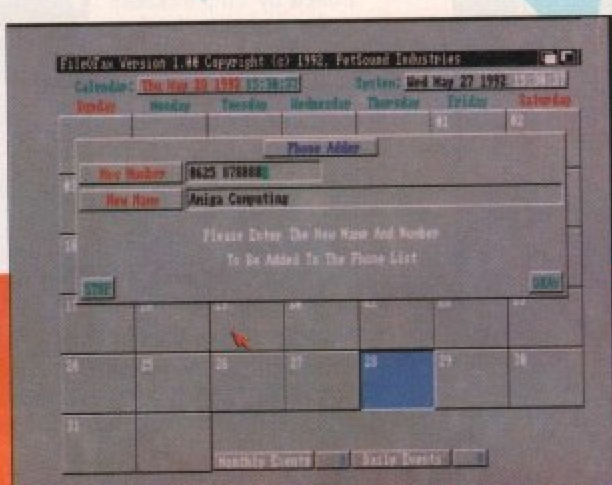
```
NCLICK ? CLICK
```

Simple, effective, and sanity saving.

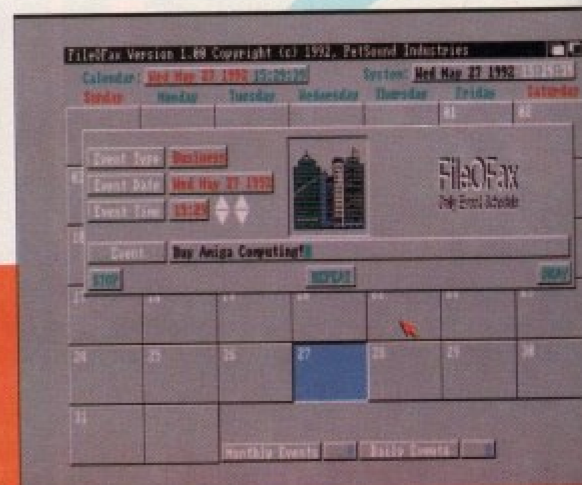
Tune-of-the-Month

This month's tune, Another World, is a mellow number with a well-executed drum pattern from Nik Racine of St Helen's in the Isle of Wight.

Composed in MED (will someone please send me something composed in another utility!), the tune moves along nicely and should keep you listening.



Add your friends' phone number to the list...



...or set up a few diary dates

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The HD8+ hard drive offers up to 8Mb of standard internal Fast RAM expansion and the A530 Combo, up to 8Mb of 32-bit wide fast RAM expansion. Both feature a SCSI controller, which supports up to 6 additional devices, and an Autoboot/Game cut-off switch. Both are available in 52, 120 and 240Mb hard drive versions.

In addition, the A530 Combo zooms the Amiga forward with an 030 accelerator, running at a blistering 40MHz. This enables your Amiga 500 to run at an incredible 12.1 MIPS, faster than an Amiga 3000! No other product in the world combines all the features found in the A530 Combo! A plug-in PC emulator option, shown below, is available for both the HD8+ and A530 Combo.



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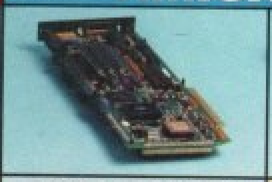
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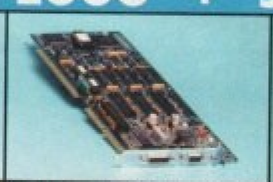
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MultiDOS

Author: Kjell Didrisken

MultiDOS, like the better known MessyDOS, is a utility to enable Amiga owners to read, write, and format PC disks using their standard Amiga floppy drives.

This is particularly useful if you want to share graphics or text with PCs, STs or Macs, and is essential in some cases when you want to send files to DTP bureaux or other commercial organisations.

MultiDOS is ready to go on this month's CoverDisk, but has not been mounted. To do this, type the following command in the CLI window left open at the bottom of the CoverDisk screen:

```
PCMOUNTALL FROM DEVS:MOUNTLIST.MULTIDOS
```

If you keep an eye on the memory count at the top of your Workbench screen, you will notice that MultiDOS takes up a fair amount of memory when mounted, but as it can be easily turned off again with the command PCKILLALL, this shouldn't present a permanent problem.

Once MultiDOS is operational, it treats the Amiga's floppy drives as both AmigaDOS and MS-DOS drives at the same time. For example, DF0: is also MD0:, DF1: is MD1: and so on, and to format a floppy in either Amiga or PC format, it is a simple matter of using the appropriate format command.

The standard Format command is used for Amiga disks, but for PC disks, the PCFORMAT command must be used. Fortunately, the author has seen to it that this is much easier to use than the MessyDOS equivalent, MessyFmt.

For a start, there's a Format specification file in your S: directory which gives the Amiga all the information it needs to set up the PC disk so that you don't need to answer a dozen questions as with MessyFmt. Secondly, the syntax of the command is very similar to its AmigaDOS counterpart.

To format a PC disk in your external drive (as long as MultiDOS has been mounted, of course), you would type:

```
PCFORMAT DRIVE MD0: NAME MYDISK
```

There are the usual options such as QUICK and NOICONS, full details of which are given in the on-disk documentation.

For the moment, it is enough to say that the usual AmigaDOS commands, such as Copy and Dir, will work with your PC disks, and that MultiDOS devices can be accessed via SID and TDM. This makes the Amiga a much more efficient PC disk management system than the PC itself, which says a lot for the Amiga's archaic rival.

The one major bug with MultiDOS is that if you copy files with names of more than eight letters or three letter suffixes to a MultiDOS device when using a Kickstart 1.2/1.3 Amiga, the system will crash.

This is because MS-DOS only accepts files with the shorter names, a fact which may seem strange to Amiga owners used to naming their files any way they want. Keep this in mind and you should have few problems with the program.

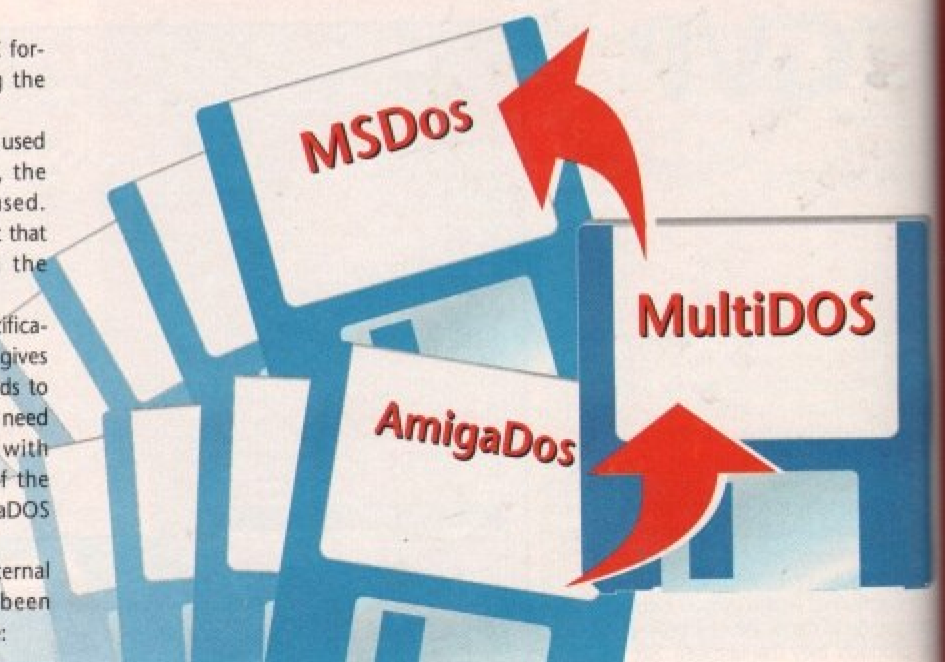
To help users install MultiDOS on a new floppy or their own Workbench disks, we've included a simple installer script on the CoverDisk. This will copy the MultiDOS files to a disk called MultiDOS, so you should first of all give your Workbench disk this name using the Rename feature found in the Workbench pull-down menus.

Secondly, you'll need between 75 and 80k of free space on your disk, so delete some of the unwanted stuff before copying MultiDOS. If you are using a hard drive, the script will copy the relevant files to DH0: as long as you have booted from the hard drive.

An alternative to renaming your new disk then changing the name back after the installation is complete would be to use an Assign command. To do this, open Shell and type the following command before running the install script:

```
ASSIGN MULTIDOS: "DISKNAME"
```

where Diskname is the name of the disk on which you want the program to be installed.



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Amiga Computing's CoverDisk has seen a lot of high quality reader submissions over the past year, many of which have graced the disk boxes of users throughout Britain, and in recognition of the indispensable service of all those hard-working coders out there, we've decided to run a readers' awards competition. For now, all you have to do is fill in the form below to nominate your favourite three progs in the categories shown.

Send the form back to me at the CoverDisk Submissions department and we'll print the final voting form in the next couple of months. The vote will double up as a competition, with the winning authors receiving glittering prizes. As an added bonus, all those who voted for the winning entries will go into a prize draw for a spectacular prize.

Look out for further details of this when the voting form is printed.

Category 1: Game-of-the-Year

Nomination 1: ______
Nomination 2: ______
Nomination 3: ______

Category 2: Utility-of-the-Year

Nomination 1: ______
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Nomination 3: ______

Category 3: Tune-of-the-Year

Nomination 1: ______
Nomination 2: ______
Nomination 3: ______

Please feel free to enclose a note with your nominations setting out how you think the CoverDisk has succeeded or failed in the last year and how you think it could be improved.

Sensible suggestions will be put into practice if enough people think them necessary, and outlandish ideas will be binned on sight, so if you want to change what is, after all, your CoverDisk, drop us a line.

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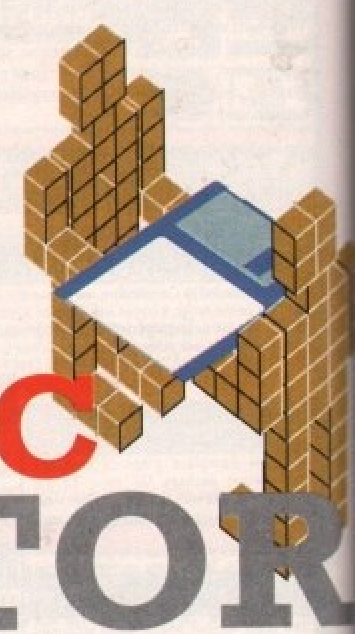
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Phil Morse assesses this month's bumper bundle of PD and shareware goodies



PUBLIC SECTOR

Flag Catcher

17 Bit Software, Disk 1965, by Brian Turnock

This is a smoothly programmed, attractive-looking puzzle game, created in Amos and good for a few hours' fun in between playing those full-price spectaculars.

You are presented with a grid which contains a flag, hidden who knows where? Well, no-one at this stage, as the grid is covered up.

Uncovering squares, by pressing your Fire button after moving to the required position, may present you with a clue as to the flag's whereabouts – an arrow maybe, or a number telling you how may squares away the flag is.

Alternatively, you may uncover a bomb, which will cover up all the squares you have uncovered so far, thus dispensing with all of your clues.

Guess what? You only have a certain number of moves in which to find the flag. Dastardly programmers.

As the levels progress, the number of "friendly" clues diminishes, while the number of nasty bombs rises drastically, making the whole thing a lot harder.

At the end of the game the board is uncovered, *Strike it Lucky*-style, revealing the position of the elusive emblem for you to umm and ahh at.

Also on this disk is an grossly understated and wildly funny Stan Laurel animation – well worth taking a look at, I promise!

E-Type

17 Bit Software, Disk 1930, by Matt Hall

Based upon the age-old arcade favourite Asteroids, this dubiously-titled version upgrades the mono original and takes advantage of the Amiga's obviously superior graphical capabilities.

The asteroids, now 3D, spin as well as move. There are also outrageous power-ups which give you missiles about 20 times the size of your ship.

As you progress you are faced with space ships as well as asteroids, although they don't actually seems to do anything that the rocks don't – they are just different sprites.

Although this looks and sounds a lot nicer than the original, it's missing some of its predecessor's features – hyperspace, asteroids breaking into smaller, more dangerous rocks when hit – and so some of the outrageous addictiveness of the 10p-a-play original. Still, it's reasonably playable and brings back memories.

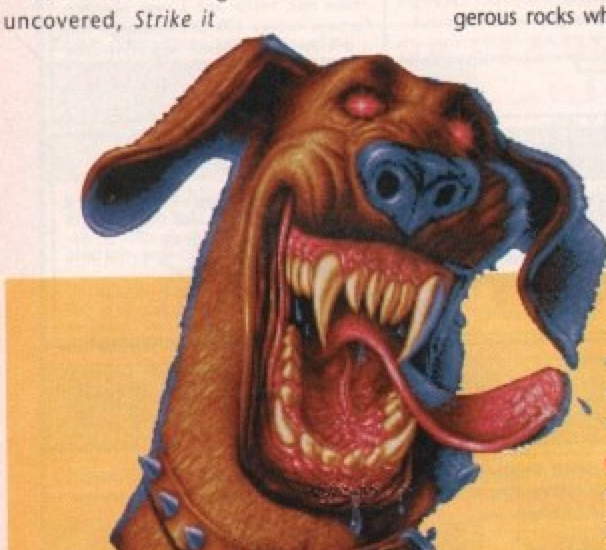
Virus Checker/Boot X

17 Bit Software, Disk 1954, by Dave de Pauw

A couple of competent virus checkers, boasting full Kickstart 2.04 compatibility, a rise in the number of non-virus boot blocks recognised (to reduce the numbe of "false alarms"), improved R.O.L.L. an Saddam virus handling, keyboard contro and several other refinements.

For a virus checker to be really effective though, it needs to be kept regularl updated, and this is where these killer really score.

Updates are available from virus-kille *extraordinaire*, the famous Erik Løvendah Sørensen, who is also offering, along wit his group (who can best be described a the Guardian Angels of the virus world) reward of $50 for people who supply th names and addresses of those known to b



DANGEROUS DEMOS!

Most demos, it must be said, are about as dangerous as a half-set jelly, and about as interesting.

For all the programming genius that goes into making a cube bounce off a polygon into a wall while a dice spins in the top corner of the screen, the entertainment value of such efforts is marginally less than zero for all but the programmers who then immediately shout "I can do that!" and knock out more of the same to bore us all.

What is obvious is that all the programming knowledge in the world is of no use unless you apply it properly, creating finished products which are amusing, innovative and interesting – preferably all three.

Luckily, some of this month's demos (though, I must add, a minority) achieved this aim, and here are my favourites.

- **Jesterday** *NBS, Disk M430, by Sanity* contains some original graphics, which, although somewhat limited, are absorbing, as is the music – a selection of Pet Shop Boys-ish numbers, which sound in turns layered, professional and tuneful.
- **Front 242** *NBS Disk D769, by Symbiosis* deserves a mention because it features the music of Euro-electro popsters Front 242 (well I never!) alongside some suitably obscure strobe-ish pictures of who one can only assume are members of the band. Not particularly stunning, but original and entertaining.
- **Euphoria** *Amiganuts, Disk 1248, by Ian Raichnie* contains some truly original stills – both DPaint and HAM/ray traced efforts – which are impressive in their own right, not just because they happen to have been drawn on an Amiga.

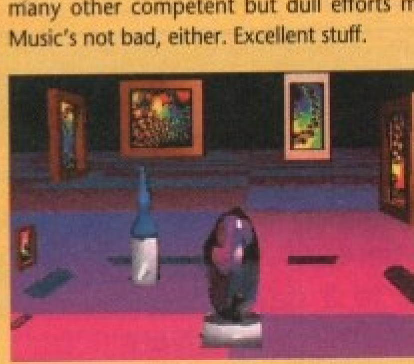
It's all very New Age and fantastical at times, but the pictures never descend to the level of boring cliché as so many other competent but dull efforts manage to do. Music's not bad, either. Excellent stuff.

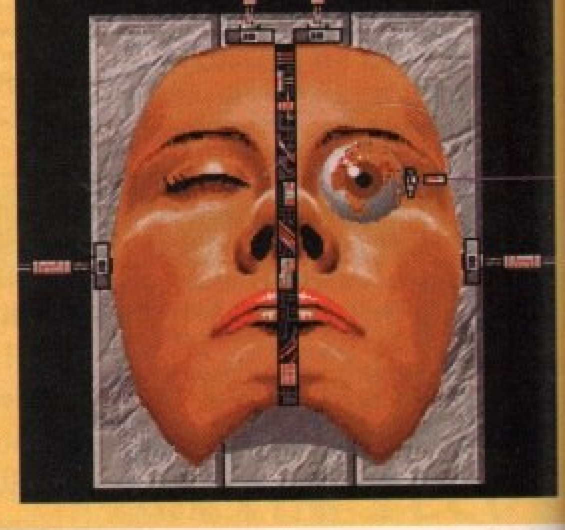
- **Project Techno** *17 Bit, 1985 A/B, by Quartz* A two-disk spectacular sampling all your techno faves from Altern8 and Human Resource to SL2, Prodigy, Bizarre Inc "and loads of others I don't know the names of".

It starts wonderfully, really mixing up the source material to provide some fresh and interesting sonic madness, but unfortunately my copy crashed after five minutes, leaving the other 55 minutes unheard.

Still, from what I did hear, I can recommend this wholeheartedly to the Vicks-and-bobble-hat posse.

- *If you think your piccies or music demos can beat these, send them to me at the usual address.*





Two original stills from Ian Raichnie's Euphoria collection

creating viruses. You're in safe hands with these programs, it would seem!

Super Pacman 92

17 Bit, Disk 1973, by Pendle Europa

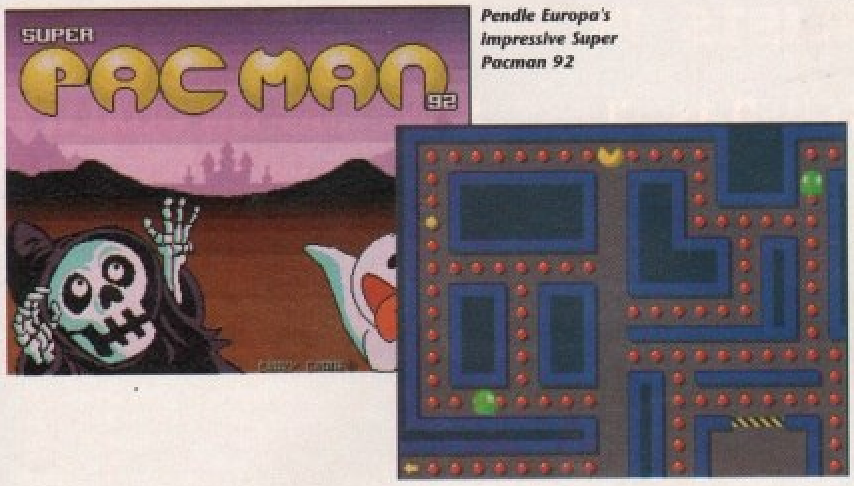
This is described by 17-Bit as the best PD pacman ever, and I'm inclined to agree. The graphics are smooth and, on the whole, faithful to the original.

All the usual features are there – power pills (dubiously referred to as "acid" by the programmers), fruit, eyes which shoot around the screen when you "eat" a ghost, and the familiar and frustrating waiting movement your pacman makes when he's been ghosted.

The difference is that the screen scrolls as you move, so at any one time you can only see a part of it. I'm not too sure why this is – maybe the levels are bigger than the original, but this does not really add any addictiveness to the game.

You also have to remember where there are dots you have yet to eat, as they're not all visible to you at all times. Still, I'm probably just moaning because it made me think a bit.

Generally this is competently programmed, very playable and full of features, even stretching to a top 30 scores chart. Well recommended.



Pendle Europa's impressive Super Pacman 92

Scanner Disk Magazine

Telescan Computer Services

Disk magazines, I have decided, are a good idea. Serving an enthusiasts' market, they are often extremely useful sources of information and programs, and are very green too.

This magazine contains a lot of interesting material, obviously sourced and put together by a person or people thoroughly dedicated to the Amiga.

From stories regarding the dubious practices of box-shifters to amusing and sometimes damned ridiculous stories involving computers from all around the world, there's a minefield of information which is in turn funny, useful and educational – and always very readable.

As well as news and editorial information, it contains truly valuable lists – such as the latest Fred Fish disks – and an absorbing section explaining how the magazine itself was put together.

As well as all of this, there are a mass of programs – some better than others, it must be said. Go-Muko is a strategy/board game where you must get four pieces in a row on the board, playing either the computer or an opponent.

There's a kind of 3D Connect 4, a chemistry program which teaches budding chemists their periodic table and would be of use to GCSE and A-level Chemistry students, and a program which calculates calendars for any year from 1900 onwards. Hmmm.

Disk 2, however, was a mystery. Either I'm very stupid or very impatient – both are distinct possibilities – or all it contains is a seriously rubbish bat-and-ball game. Remember those mono Binatone TV games that were popular in about 1924? Remember the worst game on them? Squash Practice? Yeesss.

Still, an interesting selection, and I'm sure the bat-and-ball game was a practical joke. It certainly made me laugh.

War

NBS Disk G279, by Philip G Harle

This is a truly interesting little game. It stands out immediately due to its impressive graphics, some of which wouldn't look out of place in the very best commercial offerings.

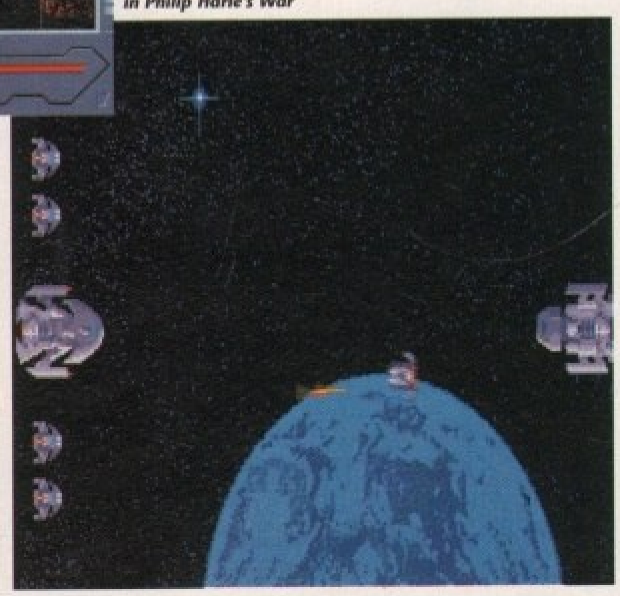
There's quite a lot to this game, but the basic idea is to use your space fleet to attack and destroy the opponent's – who can be either the computer or a friend.

Destroying the opponent's base is necessary to win completely, and this is achieved by moving your fleet towards the opponent's base on the grid.

Should you and your opponent both take a fancy to the same grid square, you can rest assured that a hi-tech space battle will ensue, which will be staged either on a planet or in deep space.



Planning and undertaking an attack in Philip Harle's War



Although these "arcade" sections are actually pretty naff, you still get very wound up indeed as you are always aware of the strategic implications of winning or losing.

It's a little bit like those old Spectrum football simulators, where the games, with their stick-men and jerky blobs, were responsible for emotional outbursts completely belying the extremely dodgy appearance and playability of the matches themselves.

You have a resource panel which allows you to allocate your resources – gained by conquering as much space as you can – to whatever you wish, from negotiating with an (unreliable) third-party who might just help you, to building more ships.

There is some digital speech, which is not averse to informing your friends that you are actually playing at "Vegetable Level", and which insults you continually. This has the effect of winding you up even more, thus adding to the fun when you see an alien blown to bits.

Along with the – admittedly also simple – Star Wars-style base attack sequence, these elements add up to a game which, for all of its amateurish flaws, is my favourite of the month.

Race Rater

17 Bit, Disk 1986

This is another horse-race prediction program. It allows you to choose your type of race and meeting from the various British courses as well as the time of the race; the horse's name and form; the weight of the rider; the animal's past finishing positions and so on.

It's not particularly well presented, and unfortunately I have neither the time nor the money to test it to see if it works, but should you be into this kind of thing, I suppose its as good as any. Let me know if you win a million with it, and then maybe I'll assess it more accurately...

What's going on in the PD world?

Do you have any news about anything relating to the world of PD? Maybe Prince Charles has opened his own PD library or your library has just topped one million individual titles. If so, drop me a line.

Calling all PD libraries

First of all, thank you to everyone who has submitted PD recently – and apologies to those whose disks have not yet been reviewed. Space allows only a small selection of the very worthy material submitted to reach the news-stands.

However, your chances of getting you stuff in print will increase dramatically if you label the disks clearly and enclose printed information as to what each disk contains, who wrote it, and any instructions.

Submissions should be sent to me, Phil Morse, at Amiga Computing, Europa House, Adlington Park, Macclesfield SK10 4NP.

Please do not send SAEs as I simply do not have the time to reply to you individually. Sorry!

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As ever *AC* brings you the best first from the ever-changing Amiga scene...

AMIGA Update

This month we'll be taking a look the latest hardware updates along with the usual assortment of software. To open the column we'll start with an upgrade to perhaps the best known software package in the business.

DPaint has long been the benchmark against which all other Amiga paint programs have been judged. With the release of v4.1 this trend is set to continue thanks to a series of long awaited additions and improvements designed to cure some of the notorious shortfalls in v4.0.

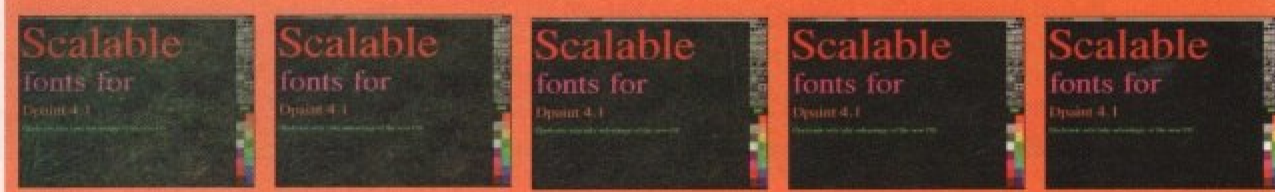
For existing users Electronic Arts are offering a two-disk upgrade which will cost £9.99 for new versions of the main program and Art disk#2.

The revision of the art disk is merely to upgrade the original Animation Player which unfortunately never worked on PAL machines.

If you only require the player, EA are happy to upgrade Art disk#2 for free. However if you're interested the main program you must pay the £9.99 upgrade fee. Obviously any potential upgrader must include his or her original disks.



A classic example of DPaint's new Scalable fonts in action...



...thanks to Fred, seamless transitions between animated images couldn't be simpler

What's on offer...

Perhaps the most interesting change from v4.0 is the inclusion of support for scalable fonts on machines running WB 2.0. and above. Employing this new feature is simplicity itself – all the user need do is select the font and type in the desired size.

The new font can then be shown as normal in the font view window and employed just like a normal font back on the canvas.

Running a close second to the inclusion of Scalable fonts is a major improvement to the metamorphosis option.

Previously the function was limited to brushes with a maximum width of 250 pixels. Now however, all restrictions have been removed and full screen metamorphosis is simply a matter of available RAM.

If there's one area that needed attention more any other it was speed, especially concerning HAM and some of the more advanced painting modes. Fortunately EA have made a reasonable attempt to cure the problem with noticeable speed enhancements when employing features such as Blend, Smooth and anti aliasing.

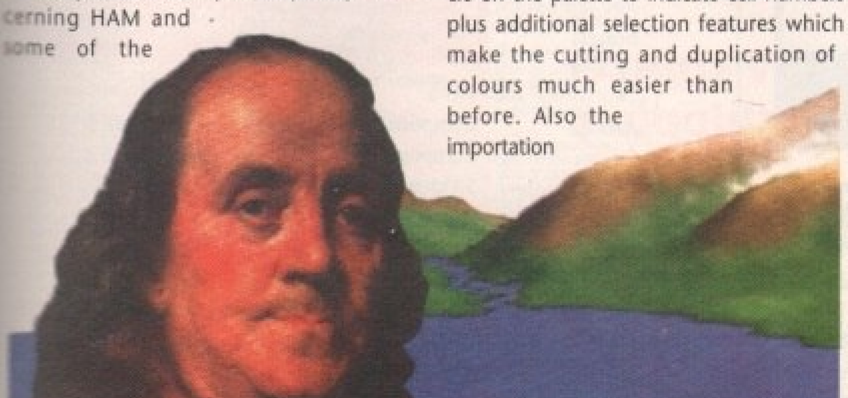
Processing techniques such as Tint, Hue and Colourise have also been improved. Unfortunately enhanced speed with HAM is negligible at best.

More HAM enhancements include markers on the palette to indicate cell numbers plus additional selection features which make the cutting and duplication of colours much easier than before. Also the importation and conversion of HAM brushes has been tweeked to improve performance.

Along with the scalable fonts perhaps the biggest improvement in the eyes of countless DPaint animators is the new option to carry stencils across frames – an infuriating omission in earlier versions.

Another animation-friendly change is the option to set the offset of the Toolbox and Anim control panel when running in extreme overscan via a new Tooltype, namely ToolLimit. The new positions are simply added to DPaint's Info icon and from then on will act as the default setting for the software.

If you're interested in an upgrade that's well worth the £9.99 asking price you can contact Electronic Arts on 0753 549442.



The old sparkie himself overseeing the latest version of the ultimate image processor, but will it continue to dominate with the invasion of the young pretenders? Don't miss next month's issue to find out...

ADPro finds Fred...

After a lonely vigil as the Amiga's premier image processing package, ADPro has finally found a friend. In its latest update ASDG have added an impressive animation and batch editing program entitled Fred.

This new program comes as a standalone package in the ADPro bundle which can be run both with or without ADPro.

The primary aim of the new software is to enable the power of ADPro and ARexx to be applied without the need for total ARexx literacy. Although ARexx is a wonderful language, many users have neither the time nor the inclination to master it. As a result, ASDG have finally done the decent thing and made the language, and in turn ADPro, much more accessible to the user by providing an intuition-based interface which will automatically apply certain ARexx/ADPro scripts while adding the option to use exiting scripts on batch files.

Now before all the existing ADPro users rush to the shops or start signing cheques for the upgrade, it must be stressed that Fred is not an ARexx macro generator – unfortunately. Although it does support batch editing in several forms they are strictly aimed at animation.

For example, it's possible to load in two separate images and instruct Fred to generate an animated fade from A to B using ADPro's Composition option – as in our example – over a number of frames, thus producing a new multi-frame anim from just two initial frames. This can then be saved in the file format of your choice and combined in DPaint or any other anim compiler.

Alternatively the output could be controlled by ARexx and sent to a still frame recorder. This is perhaps a classic example of the compromise between automation and ARexx literacy.

Although the program will compile the aforementioned sequence by issuing composition commands via ARexx to ADPro, it does not produce any additional scripts.

As a result, if you wanted to send the out-

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AMIGA Update

put to a still frame recorder you would still require a standard ARexx script waiting to be launched from Fred with which to control the output of each image to a display board and subsequently onto tape.

Just as in our still frame example, an ARexx script would be required to complete the conversion prior to saving.

If this frustrating inconvenience can be ignored, the power of the animation options makes Fred the most impressive anim tool yet to appear on the machine.

The ability to auto-generate animation effects previously only possible through hardware intervention is sure to win the hearts of many animators.

Another amazing option is the ability to stretch or shrink time. Sound impossible, but I assure you it's true. For example, if you have a 30 FPS animation but know your display device can't possibly manage that speed, Fred can change 30 FPS into 15 FPS.

The information within the original 30 FPS will then be squeezed into 15. As a result the finished anim will appear much more fluid than by merely dropping every other frame.

Even more impressive is the ability to stretch time. If the scenario above was reversed and you had 15 FPS but required 30, Fred could generate the "tweens" to produce a full 30 frames from the original 15.

The end result would be a much smoother anim than before. Of course it wouldn't have the quality of an anim generated with the correct number of frames initially, nevertheless it could turn out to be a real lifesaver on occasion.

Aside from compilation, Fred is also capable of a miniaturised playback of the generated anim, no matter what the format of the files being edited, even 24 bits.

It achieves this minor miracle by producing miniatures of each frame which are then appended to each file. Once the editing and processing is over the animation can then be viewed as a thumbnail representation prior to compilation. It's even possible to have the miniature play back at the frame rate of your choice.

As ever, space is short so for more of Fred's hidden secrets and the latest enhancements to ADPro, I'm afraid you'll have to wait until next month, when *AC* will bring you the definitive guide to image processing.

There'll be a three-way head-to-head with the latest ADPro on one side, and GVP's eagerly awaited Mirage and Image Master packages on the other – both of which are being marketed as ADPro beaters. To find out more, don't miss next month's *AC*.

Existing ADPro users can update direct with ASDG but if you like what you read and want the latest version of the program, contact Silica Shop on 081-309 1111.



Power's all-new external optical, now faster than a very fast thing

Optical upgrade

In the latter part of 1991, Power Computing released their 128 optical which although initially expensive is perhaps the perfect answer for those among us who require almost unlimited storage.

Thanks to the cutest 3.5in floppies on the planet, adding another 128Mb of storage to your system is simply a matter of pushing the eject button and sliding another floppy (a rewritable optical costing only £30) into the drive unit.

In the intervening period, Power have been hard at work trying to squeeze more speed from the drive, and by the time you read this article the first batch of the new Power 32ms drives should be on the streets.

Aside from general speed, the biggest bonus of 32ms access is that it could prove to be the ideal environment for the ever-growing band of direct-to-disk recording systems, all of which require at least a 32ms access time from their storage devices.

Aside from the new improved access, Power have put a little more into aesthetics of the drive by recasing their external optical, which by pure chance can be seen in all its glory on this very page.

If you're interested in the new drive in either its internal or external form you can contact Power on 0234 843388.

IV splitter shipping

After a long delay the IV24 splitter has finally arrived in the hands of eager IV users. Although the board has been available since late 1991, a great deal of the board's potential has been inaccessible due to the delay in supplying the splitter.

At long last, GVP have got their act together, and to their credit they've despatched a new splitter to all registered users free of change.

Without the splitter it has been impossible – without investing in third-party peripherals – to take advantage of the board's PIP (picture-in-picture) option, frame grabbing or built-in genlocking abilities.

Thankfully, the board now comes as standard with the new splitter plus an additional ROM upgrade designed to improve speed and allow original boards to use third-party software such as TecSoft's TVPaint. Thankfully this new ROM is also included with the splitter to all registered users.

The new splitter comes in two forms – the free upgrade version entitled the VIU-S, plus an additional offering in the form of a broadcast-quality alternative called the VIU-CT, which retails at £399 and should allow the IV24 to slip unnoticed into even the most advance Studio setup.



A close look at the long-awaited IV24 splitter, bristling with inputs and outputs, as all the best add-ons should

Input and output

Inputs

VIU-S	VIU-CT
Composite 1	Composite 1
Composite 2	Composite 2
S-Video (Y/C)	S-Video (Y/C)
Red	Red
Green	Green
Blue	Blue
Composite Sync	Composite Sync
Digital Keyer	Digital Keyer
Analogue Keyer	Analogue Keyer

Outputs

VIU-S	VIU-CT
Composite	Composite
S-Video (Y/C)	S-Video (Y/C)
External Keyer	External Keyer
	Red & Green & Blue
	Composite Sync
	Y & R-Y & B-Y
	VGA Monitor

VIDEO BLENDER

A TV station

Over the last year, Progressive Peripherals have made a real impression at the *AC* offices, with a series of hardware releases that have impressed even the most cynical office hack. As a result, news of a dedicated video/audio mixing station early last year was eagerly waited.

After an agonising delay, their latest brainchild is finally ready to make its debut on the UK market. For a while we suspected a similar situation with the Blender as exists with its infamous kitchen companion the Video Toaster.

Thankfully this was not the case, and the PAL version is now safely entrenched at the *AC* offices. Before we dive headlong into the various control programs and utilities, it's perhaps worth defining exactly what the Blender was built for...

The Blender is basically a box of tricks designed to provide the ultimate mixing environment for video, sound and Amiga graphics and animation, via a single self-contained unit. Sounds impressive, and indeed it is.

The unit itself offers two video ins, one of which is normal composite while the other consists of separate RGBs plus black-burst, Key-in and BNC connections.

Monitoring is well catered for, with two identical composite video outs – one for output to tape and the second as an optional monitor out.

Audio

On the audio side, the unit offers twin stereo inputs on the front and a single stereo out on the rear. As with all quality video kit, the Blender also boasts RGB-through. The Amiga's RGB out is connected directly to Blender and then passed unharmed to the monitor.

Fortunately the blender occupies the serial port, rather than the paralle,l so it's impossible to employ DCTV on the same machine. Of course you could also record the DCTV element of the production first and employ the Blender to mix this with other graphics or additional video later.

As you may have guessed, at the heart of the Blender is a very impressive genlock which operates as the palette within which all the various video ins are combined.

Although the rear of the unit literally bristles with inputs and assorted outputs, the front is relatively bare. On the left are basic saturation and contrast controls for the final composite signal leaving the unit.



The VideoScriptor allows you to compile any number of wipes – animated or otherwise – to play their part in the show

Alongside the on/off switch are the twin stereo audio ins mentioned earlier with a pair of accompanying knobs for adjusting input.

With such an obvious lack of manual control, software is the key to the Blender, and in fact – apart from adjusting audio input and basic image preferences – all the Blender's options are controlled from a variety of custom-built programs bundled with the big vanilla box.

As mentioned earlier, the built-in genlock is the heart of the system and is perhaps the ideal place to reveal some of the many features of this impressive product

The genlock itself is easily the best VHS-based unit I've yet had the pleasure of using. Aside from the impressive array of effects and near-broadcast quality output, perhaps the most important plus is its flexibility, which far outstrips all its competitors in the VHS market.

The keying options include Background, Invert, External, Luma and Notch filter. Some of the above are no doubt familiar but others may be a mystery. Invert can be found on most modern genlocks, while Luma keying is an option usually only found on hardware in the S-VHS bracket and above.

The Luma option allows you to define the brilliance at which an image will become keyed. As a result images with varying luminance or brightness appear to move back and forth through an invisible wall as their luminance increases and declines.

The Notch filter is another unusual feature which allows the user to sharpen the keyed image. For example, if you want to display a detailed Amiga graphic above a video signal, the notch filter could be used to sharpen the detail between the keyed and background image.

The price for the enhanced display is a slight loss in saturation. Personally, I found it well worth the sacrifice, especially during titling.

Aside from the impact of various effects perhaps the biggest bonus is the way in which the Blender can apply them to the incoming signals.

The system allows for two video inputs, the Amiga's RGB output, plus a definable local colour. Thanks to the Blender's channel selection, a maximum of three separate signals can be combined within a single output image ready for recording onto the target VCR.

This may sound a little confusing, but in practice it means you can have the two video signals mixed in the background while an Amiga graphic floats above

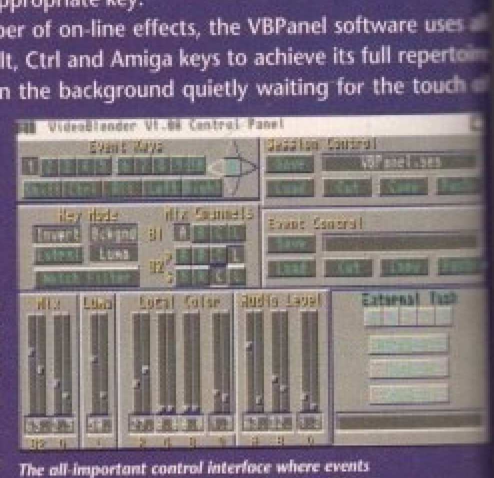
Magic buttons

Once your effect is generated with the various mixes and transition times set, the next problem is where to store it, and perhaps more importantly how to apply it easily during a production session.

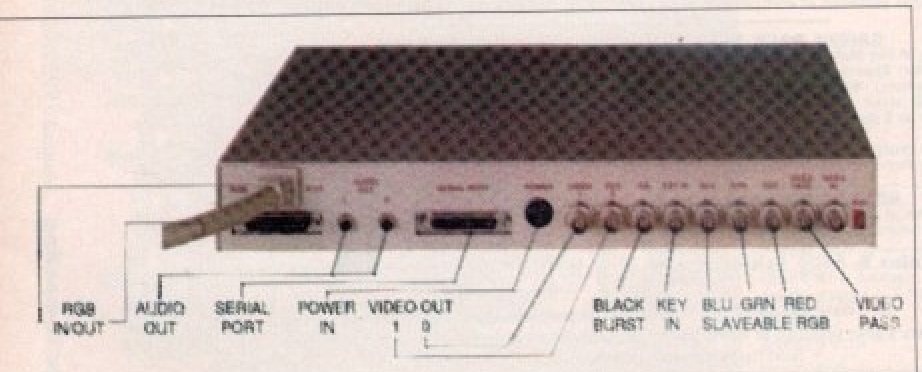
The answer is provided by the function keys which serve as a home for all your designer effects. These can be saved individually or together and then activated at any time by simply tapping the appropriate key.

To produce such a large number of on-line effects, the VBPanel software uses all the function key plus the Shift, Alt, Ctrl and Amiga keys to achieve its full repertoire of 60 effects which sit invisibly in the background quietly waiting for the touch of the appropriate button during the mixdown.

If, for example, you're using an external program that requires certain function keys, all is not lost. The control software allows you to cut and paste effects as required thereby freeing the required keys. These software essential keys can then be made transparent to the Blender and as a result work as normal.



The all-important control interface where events are designed and entire sessions saved to disk



A box of tricks designed to provide the ultimate mixing environment for video, sound, Amiga graphics and animation



MixMaster, the program behind countless designer wipes. Animated intros couldn't be simpler



in a tin can

Paul Austin takes to the director's chair and starts making movies with the aid of Progressive's amazing new Video Blender

Another example might be to have a title above a local colour which could slowly fade to reveal a video signal, while retaining the title.

The variety and combination of channel selection and mixing methods is almost infinite. All these keying effects can be employed either singly or in concert, while the channel selection offers countless possible combinations.

With such an array of possible mixing and locking options, the output control has to be something special. In the case of the Blender, all the possible configurations can be saved as either single events or in groups as entire sessions.

Each event can also be given timed transition between its primary and secondary state. As a result, effects can not only gradually be introduced but they can transform between channels as they do so, producing effects that as yet have only been available to broadcast TV and cable networks.

The option to time transitions between effects takes the occasionally tricky process of fader control out of the hands of the user and instead uses predefined mix levels and timed transitions to realise fades.

Results

The beauty of a software-driven genlock and mixing environment is the total fluidity of transitions which produces extremely professional results. The fade rate can vary from just 0.04 of a second right up to ten seconds. It's at these longer fade times that the benefits of software control really make their mark.

A gradual fade over ten seconds from video to local colour with titling still happily scrolling away is the sort of effect that the Blender was built for, and would be difficult if not impossible to better with a manually-driven system.

Having said that, even at high speed the system is still impressive. For example, one source can be exchanged for another instantly but with perhaps a flash of a "theme graphic" or maybe a tiny blip of brilliant colour between edits to emphasise the change.

Programmable genlock effects aren't the only options available from the VBPanel control software – in fact, each of the 60 available events can have audio control added. Like video effects, audio changes can be given a definable mix and a transition time in which the new mix is to be achieved.

Flexibility

As well as sound and vision, AmigaDOS adds even more flexibility thanks to the control software's ability to launch external programs as part of an event.

As a result, a single event could consist of a genlock effect with a timed signal transition, an audio fade over a defined period and an external program perhaps loading and displaying a still or maybe playing a sample. All this from a single key stroke – automation at its best!

The only point worth remembering is that effects generally require an intro and outro. For example, to add a spinning animation over live video you'd need one event to fade up and a second to fade out, ready for the next effect.

As a result, the variety of usable effects in a single production is unlikely to consist of 60 radically different events, unless you're prepared for very harsh transition on the final tape.

Although the Blender's fades and genlock effects are indeed impressive, the Blender also offers a whole range of wipes with which to switch between available inputs.

As you can see from the examples, wipes are basically stylised reveal effects in which one image appears to overwrite the existing one during an animated sequence.

Numerous built-in wipes come as standard, as well as an option to create your own via another Blender program entitled MixMaster.

MixMaster is basically a DPaint-style paint program with enhanced animation. It's designed to get the best from the Blender's ability to employ two-colour anims as wipes. The resulting effect is that the white part of the wipe contains the new image while the black retains the original.

These anims can then be used independently or as part of a larger script containing hundreds of normal wipes and your own designer animated variants.

Wipes are perhaps at their best when used between two video sources, although some impressive effects can be achieved when applied to animation. The actual image compilation is controlled via the VBPanel software, so you can easily define what will be wiped and which input will replace it.

My only complaint concerning wipes is the rather 70s look that's all too easy to fall into. If you're not careful, a masterpiece can soon look like a cross between a rather dodgy porn movie and an episode of *The Loveboat*...

Having said that, if you can keep your tacky tendencies in hand, some excellent effects are available with the impressive array of supplied wipes, all of which can be edited individually to produce countless variations on a theme.

Like genlock events, wipes can be assigned to hot keys for "live play" or alternatively built in to complete multi-wipe, multi-anim sequences which can then be run independently with either timed or mouse-activated transitions.

Both the genlock effects and wipes work perfectly together, offering easily the most versatile and advanced method of video production yet seen on the machine.

Criticism

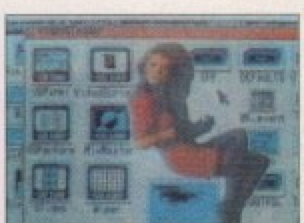
My only criticism of assorted control software is its rather amateur appearance which will no doubt put a few people off what is an excellent system.

Another annoying point is the system's need for an RGB plus sync signal as its secondary video source. This will definitely affect its appeal to amateur users.

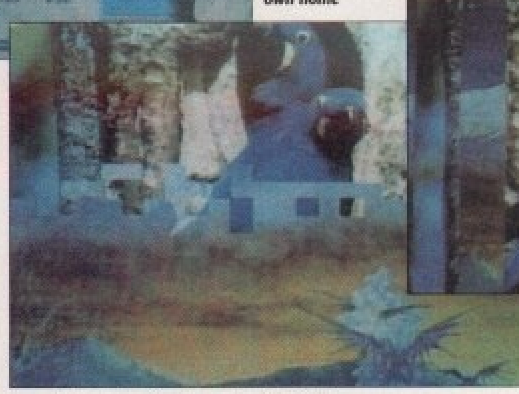
Firstly, equipment which supplies RGB as standard is very expensive, and secondly if you already have good quality equipment you'll need to invest in a time-based corrector, or TBC for short, to convert your existing signal and supply the necessary sync. Again this is an expensive process, with the cheapest TBC retailing around £1,000.

The final cause for concern is the Blender's VHS-only output. Again this will reduce its appeal to professionals, but shouldn't really affect the home user.

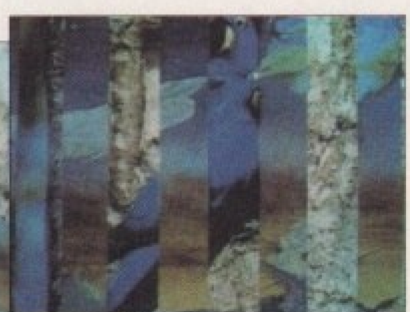
In short, the Blender is a very impressive and original product which makes existing Amiga-based VHS post production methods look very basic indeed. If you're in the market for cable station quality from a single self-contained unit, this is the system you've been waiting for. AC



Luma keying in action – now you can create your own "wheather man" effects in the comfort of your own home



An animated wipe slowly revealing the hidden secrets of an additional video in...



A standard wipe using the a definable number of strips to introduce the next image in the show

Video Blender is a product of
Progressive Peripherals and Software
Address: 464 Kalamath Street,
Denver CO80204
Tel: (0101) 303 825 4144
Price: $1,295
No UK distributor as yet



COMPETITION

As usual *AC* brings you the best prizes in the business. This month's selection of stunning giveaways comes from Power Computing, the ground-breaking company responsible for countless innovations in the Amiga market.

The products on offer include Power's stunning scanner, which has revolutionised the Amiga hand-held scanning market for both price and performance.

Not one, but two of these excellent products are up for grabs to the lucky winners. If you're either an Amiga artist or DTP person the Power Scanner is the perfect add-on to your system offering unrivalled performance thanks to its true greyscale output.

If you've been wise enough to invest in a scanner already, all is not lost. Along with the scanners, the *AC* and Power combination go on to sweeten the pot even more with the chance to win Power's latest product, the all-new 8Mb A500 expansion board.

The two boards on offer come with 2Mb as standard and are easily installed directly into the side slot on the A500/A500 Plus. The extra memory is fully auto-configuring and a through-port means hard disks and other peripherals can still play their part in your system.



Remember, you've got to be in to win, so send your entry as quickly as possible and don't forget to tick the appropriate prize box.

Entries are limited to one prize per entry. Of course, if you're feeling lucky you could always invest in a second copy of the magazine and have a bash at winning both!



ENTRY FORM

Please tick the the appropiate box for the prize of your choice

Hand scanner ☐
Ram expansion ☐

Questions

1. How many levels of greyscale can the Amiga display?

4,096 ☐
64 ☐
16 ☐

2. What does DPI mean?

Dots per inch ☐
Dithered pica increments ☐
Deep pixel images ☐

3. What does RAM mean

Random Access Memory ☐
Risk Active Microprocessor ☐
Radical Applied Memory ☐

4. How many megabytes of 16-bit fast RAM can the Amiga use?

16 ☐
8 ☐
32 ☐

Send your entry to: August Competition, *Amiga Computing*, Europa House, Adlington Park, Macclesfield SK10 4NP

Name ____________________

Address ____________________

____

Telephone ____________________

Please tick this box if you do not wish to receive promotional material from other companies ☐

Ezra Surf's Postbag

Got something to say through the pages of AC? Ezra Surf is our mailman, dedicated to sitting in a corner reading your letters and selecting the most interesting for publication.

Drop him a line at:

Ezra Surf's Postbag, Amiga Computing, Europa House, Adlington Park, Macclesfield SK10 4NP.

Please don't enclose saes as Ezra just hasn't got enough paper to reply personally. He might also have to shorten your letters, so don't be offended if you end up getting the chop.

PD or not PD?

Looking through the PD advertisements several months ago, I decided to buy the RSI Demomaker Pack from 17 Bit software, comprising of font, Bob and vector editors, program and utility disks for £4.

Because the ad stated nothing about postage or foreign penalties I assumed there weren't any, although I sent £1 extra just in case.

I have waited all this time assuming the package was held up somewhere, but in your latest issue 17 Bit are selling the pack for £5 plus 20 per cent for foreign orders!

What can I do? I sent the order months before the price change (or so it seemed to me) and it cost the equivalent of £10 in bank fees and so on. I will most definitely have to consider not buying from the UK again.

Paul Lawrie, Allenstown, Australia

If you sent your order to 17 Bit when they were advertising the pack at the lower price, they should sell to you at that price. However, they may not have received your order (did it go registered delivery?), or it may have arrived after the decision to change prices.

Most mail order companies reserve the right to change prices without prior warning, so 17 Bit haven't done anything out of the usual by upping the price to £5.

However, the RSI Demomaker is not a PD product, being originally a commercial product which was circulated around British PD libraries without the author's consent, so you may not be legally entitled to buy it from 17 Bit in any case.

I should write to 17 Bit, explain what has happened with your order, and ask them what they can do for you. They're a helpful bunch and should be able to clear up the confusion.

Remember to send your letter registered delivery, though, so you'll at least know when it arrived.

Disk dilemma

I have owned my Amiga for around 18 months and something has been niggling me for quite a while. When you have to reluctantly stop using a disk and put it back in your disk box... which way up do you put it back!?

I would like this point to be debated by your professionals at *Amiga Computing*. Personally I believe it boils down to your individual preference, but when people say to me "hey, your disks are upside down!" I have no relevant

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Industry in error?

Prize letter

I am writing this letter in reaction to the poor state of the software production and computer retailing businesses, because I sometimes wonder whether the aim of producers and retailers is to force all Amiga users into piracy.

From the way they go about their business, I'd say a lot of the people in the industry only care about the fast buck and screw the consumer. What they're forgetting is that we hold the bucks and therefore the power and it's not a good idea to treat us like idiots.

In the time I've owned my Amiga I've seen it all – the selling of a beat-up demo Amiga as new, second- or third-hand software going as new, viruses in so-called new software, ridiculous over-pricing, and bugs galore.

However, retailers seem happy to take your cash then say "don't tell me you're having problems with the program – take it up with the manufacturer".

The computer industry is busy alienating the consumer and yet complaining when they turn to piracy. They spend thousands on copy protection – which is easily cracked – then pass on the cost to the consumer.

Here's the crunch, though – some copy protection systems actually send your drive to an early grave.

When I discovered this I nearly exploded. What right do they have to do this? Don't let this issue die! What everyone has to realise is that the industry is only too happy to let us be the patsy and it won't get in line unless we want it to.

Your magazine can raise the standards by rating products properly. Stuff like F19, which had a bug in it giving you access to only a quarter of what it was supposed to, and Red Baron with its very slow screen update, don't exactly have the right feel for a flight sim.

Pirates may be the industry's favourite target, but without them I don't think they could justify prices for some of the junk they churn out.

They should cut back on silly packaging, cut out the hyper adverts, cut back on insane cash payments for useless licences, and invest instead on quality products at a reasonable price.

A survey in Australia carried out by the Prices Surveillance Authority found that 70 per cent of software is grossly overpriced.

R James, Melbourne

The debate continues! It's significant to note that we've had not one single letter supporting the view that current prices are justified by quality, from either a customer or an industry insider, but that this sort of angry, disillusioned letter is becoming more and more prevalent in our groaning mailbag.

Your tone is that of a genuine user driven to a cynicism which is only partly justified. True, many companies seem to over-advertise products which then flop after an initial massive sales boom, and some even release software which is incomplete or bugged.

However, the general quality of Amiga software, in both games and serious areas, has increased over the past year. This is not to say that a drop in prices, the abandonment of expensive and normally pointless on-disk protection, and a move away from the disk-in-a-suitcase packaging approach would lead to an improvement in the quality/price ratio. It might, and it might not.

Microprose, for example, utilise simple, easy to break manual protection, yet their packaging and games are of such a high quality that they still sell well, despite being some of the most expensive on the market.

On the other hand, a shoot-'em-up might cost £10 less, have little or no fancy packaging besides the box, be protected by fearsome on-disk routines, and make the manufacturer an instant if unsustainable profit.

The thorny topic of disk damage resulting from protection routines is one which produces cries of outrage from games houses, but in my opinion the loud and very painful noises elicited by some games can only have harmful long-term effects on your drive. Perhaps this is one reason why so many A500 drives pack it in after less than a year.

I wonder what the industry would think if they ever cared to reply? Ezra Surf promises to print any open letter received from any industry figure on this topic, so if they want to join in the debate they're quite welcome.

answer. Could this be to do with background or character, or whether you were picked on at school? It may seem trivial, but have you ever asked yourself this question? Do you find it a problem or a dilemma?

By the way, my disks go in "slide down". Is this the correct way, and do I win a prize if so?

Darren Bennett, Hemsworth

There are many schools of thought on this problem, and attempted explanations based on everything from parent-child bonding to psychosomatic trauma have been advanced.

In the final analysis, however, one must conclude that whether a disk is replaced slide down (the so-called Laundry Chute method) or slide up (the Dumb Waiter syndrome) is determined by the colour of your bed linen.

Colours in the red half of the visible spectrum, being aggressive shades, usually prompt users to thrust their disks slide down into their boxes with gay abandon.

The opposite is true for bed linen colours in the blue half of the spectrum, where the cooler, more laid back hues cause a more gentle approach to disk resettling.

I think you'll find that your duvet is a cool blue, though it might be a mauve or light purple, whose mix of reds and blues has lead to the deep-seated confusion you are experiencing.

Use the mouse, Luke!

My complaint is about the Superbase Personal package recently given away with the May issue. It is a totally useless excuse for a database.

After spending some time to create a file, the system complained that "Superbase Personal is full", so I inserted a blank formatted disk. The message then changed to "Insert Superbase Personal in any drive" and the ever-decreasing circle begins. Also, the lack of any support for DF1 is most annoying.

Is it fair to say that we will have to wait months for little booklets that tell us how to play with the garbage data you have filled the disk with rather than to use the software for any sensible use?

It all seems to be a bit of a con. The only way to use this package seems to be to update it. I'm opposed to this because, let's face it, if the first version is unstable and virtually useless why pay £20 for more rubbish?

Pull your proverbial fingers out and support the software as you promised, don't hamper it. No other Amiga magazine would insult its readers' intelligence by making them wait months to use a free disk.

Rik Johnson, Basingstoke

No other Amiga magazine has, only one month after releasing free software, produced a professional quality user's guide to that software and cover mounted it on the next issue.

I can only assume that you failed to read the disk pages in the May issue, in which we stated our intention to give away the user's guide, and that you haven't bothered to actually use Superbase Personal.

For example, by holding down the right mouse button and selecting Directory/Change from the System menu, it is possible to make Superbase use ANY floppy disk, RAM disk, or hard drive you have available.

In addition, if you think the database files on the original disk are "garbage" (they were put there to make it easier for users to experiment) you should just delete them.

If you don't know how to delete a file, I would suggest you consult our beginners' column or employ TDM, a directory utility given away on a recent CoverDisk which makes all such operations easy as pie.

Saddam worries

I have read *Amiga Computing* since I got my computer last December and also have a printer. In your January issue you had an article on the Saddam virus and the possibility that it might infect the CoverDisk.

Couldn't you sell a magazine without a CoverDisk for less money?

Graham Mackie, Glasgow

We could, but the vast majority of our readers would prefer the magazine with CoverDisk if our research is anything to go by. For a period of a couple of months in 1989 the magazine was printed without a CoverDisk at £1.95, and sales suffered because readers didn't like the experiment.

As for Saddam finding his way on to the CoverDisk, this will never happen. We have admitted the possibility that entirely new viruses against which there is no current protection might turn up on the disk without our knowledge (though this is highly unlikely), but we guarantee our disks are free from all known existing viruses.

Deserted A500?

With the release of the A600, where does this leave us committed A500 users? As far as I can see, the A600 will be aimed solely at games players and with the extra cartridge slot Amiga games could soon be released exclusively on cartridge format.

The next step up is an A1500, but with its expansion slots and so on, more software will begin to be produced for the extra hardware, leaving the A500 out in the cold. I personally enjoy a good game, but I mainly use my computer for serious use, either through my own programming or by using applications packages.

However, if they all start to take advantage of the new machines, will my A500 soon be obsolete?

M K Roberts, Kidderminster

Despite the news, revealed exclusively in last month's Amiga Computing, *that Commodore have officially dropped the A500, the software and hardware industries would be barking mad to follow suit. When you have an installed user base of over a million in the UK alone you don't walk away in favour of a machine which has only just started to sell.*

Games software at least should continue to be released in A500-compatible versions for several years to come, and as the Amiga's basic chip set hasn't as yet changed to a great extent, most if not all serious applications released in the foreseeable future should work on the older machines.

As for the A600 "cartridge" slot, this is in fact a rather expensive 4Mb RAM credit card-type slot, and it is unlikely that manufacturers will release software in this format until it can be made an economical possibility.

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GRAPHICSTATION SUPPORT

Continuing our tour of the GraphicStation, we concente this month on the Picturesque paint package

GraphicStation offers many possibilities for tweaking, converting and transferring graphics around different machines, but it also comes complete with its own paint package in the form of Paul Burkey's Picturesque.

Using this program, users should be able to create graphics to rival the output from most commercial packages.

To begin, let's load the program by either selecting it from the ShortCut menus or double clicking on its icon. The shareware message will appear first, and after a single mouse click you will be ready to paint.

Picturesque defaults to a lo-res screen, which is ideal for creating graphics for games and so on, but for static images of a higher quality we'll need the hi-res screen. Select Format/Hi-res from the Project menu to go into this mode.

Default palette

Again, the default palette is fine, but if we want to paint, say, a countryside scene, we'll need a few more greens and browns than are available to begin with. To create a custom palette, click on the palette gadget on the lower line of gadgets, which will bring up a fairly standard looking palette tool.

The first job is to set up the colours we'd like as our deepest and lightest greens. You'll find a very dark olive colour fourth from the right of the colour bar, which you should click on to make it the current colour.

Now click on Ex (Exchange) and then on the second colour from the left (the bright cyan colour). Notice that this colour is now olive and that the cyan has moved to where olive used to be.

This will be our darkest green. To set up the lightest green, click on the third colour from the right of the colour bar, then on Copy, then on the very deep blue colour in the middle of the colour bar.

Now that this colour is light green, click on it again to make it the current colour, then click on Spr (Spread), and then on the dark olive at the left of the bar.

See what's happened? Picturesque has created a colour "spread" from light to dark green on one half of the colour bar. Do the same with light and dark blue on the right half of the colour bar, using the cyan we originally moved over to the right as the light blue, and the dark blue you should find on the extreme right. Simple, isn't it?

Before we return to the canvas, there's one thing left to do. No nature scene would be complete without the colour brown, which we as yet don't have on our palette. To make the new colour, click on one of the dark blues to make it the current colour, then play around with the RGB (Red, Green, Blue) sliders in the bottom left of the screen.

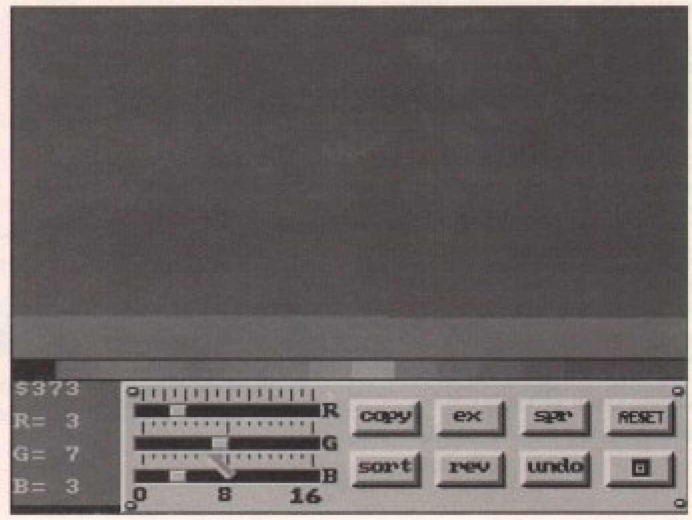
You can experiment for yourself, but a recommended set of values would be Red 9, Green 5, and Blue 3, which you can see in numeric form on the extreme left. This will give you a fairly all-purpose brown. Once you're happy with it, click on the boxed-out dot in the bottom right to return to the canvas.

Competent

Unless you are already a competent freehand artist, it would be best to start the scene by drawing a grid on-screen to guide you when composing the picture.

Choose a bright green, then click on the straight line tool (fourth from left on the top row) and draw horizontal lines every 50 pixels down and vertical lines at 100 pixel intervals.

When you've finished, you should have a grid of more or less square boxes, which you should now flip to the spare page by pressing the "j" key. Try pressing this key a few times to get the feel for how quickly the spare page flips over. We'll be using quick flips to take a look at our grid as we paint the scene, so the "j" key should take a bit of a hammering.



Mixing and spreading colours is made easy by the friendly Palette tool

Now to start painting. Flip back to the blank canvas and click on the Fill tool (the one with the large "F") and on dark blue. Fill the entire screen with this colour, as we should always start with the dark colours, then work our way up to the lightest. Dark blue is as dark as the sky is going to get, so this is the base.

Now select the darkest green and click on the solid rectangle gadget (second from the left, bottom row) and draw a filled rectangle starting on the left from about of a third of the way up the screen and ending in the bottom right-hand corner. This will form the basis of our land mass.

From here on in, the shape and form of the landscape, and just how good the finished picture appears, is entirely down to your own imagination and artistic ability. For the rest of this column, I'll be concentrating solely on tips and techniques to make the budding artist's life a little easier.

For example, you'll probably want to introduce a tree or two into the picture. To start a tree off, it's best to position the trunk first using a solid rectangle of brown, then use the spray can's small spray size to brush in the branches as they spread out from the main trunk.

To change brush sizes, choose Spray Can from the Options menu and select one of the four sizes available. As I mentioned, the small size is best for reasonably detailed work such as the addition of branches, so select this one for now.

Tree branches, unless you're working on a fairly exotic species, should always be drawn as a series of Y-splits, so start with a single Y shape, then add a few to the two branches of the original Y until the tree looks more organic.

Be careful not to overdo the branches, though, as from a distance you can rarely see more than a handful of the major ones.

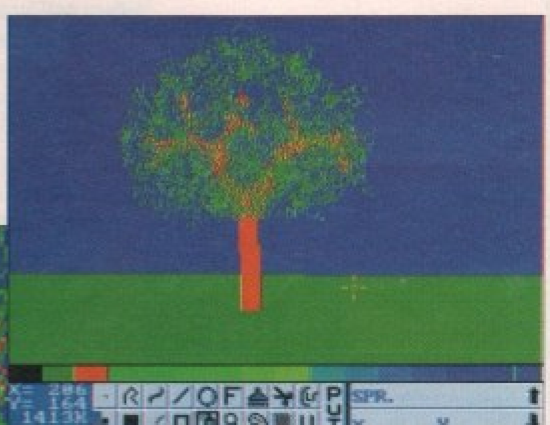
Try to ensure that a few droop downwards or your tree will look rather startled when finished, and will appear not to answer to Mr Newton's law.

Airbrush

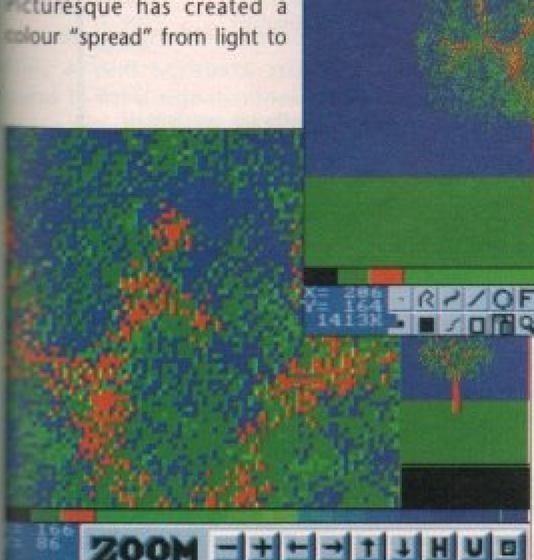
When adding the leaves, start with a small airbrush and a dark colour of green, then spray in a dense pattern towards the lower part of the tree and a lighter pattern towards the top.

Add a little life to things with progressively lighter colours, but try to avoid using more than three shades of green, and always avoid just drawing around the branches. Don't be afraid to obliterate the work you've just done by drawing over it as this is essential for the growth of a painting "out" of the canvas.

OK, we've looked at the spare page, the spray can, fills, and a few techniques. Next month we'll conclude our examination of Picturesque with a look at a few of the more advanced features. For now, experiment and have fun.



Excuse the dodgy drawing, but you can see what I mean, can't you?



The flexible Zoom Function is a great aid to detailed touch-ups

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The system includes a Sales Ledger for customer accounts, a Purchase Ledger for supplier accounts, a Nominal Ledger which allows bank and cash transactions and defines the structure of the Trial Balance, and an Inventory system to track the movement of stock in and out of the business.

Report facilities are extensive and include the production of a Balance Sheet, a Profit & Loss sheet, an Audit Trail, a Trial Balance, Day Books, Account Histories, Invoices, Credit Notes, Remittance Slips, Labels, etc.

Optional Extras *Action Module:* A 'things to do' list with various nag levels (if required!). *Carrier Module:* Up to date online information on carrier services including the Royal Mail and other popular couriers. *Communications Module:* Phone code to area checking and charge band analysis. International dial codes and rates. *Customiser Module:* Allows us to write additional routines for you if required. *Fraud Module:* Automatically checks card numbers, addresses and cheque accounts against information held on file. *Home Module:* Accounting for the home, credit cards, cheque accounts etc. *Jobs Module:* Tracking of active jobs, materials used, time spent, invoices and credits issued etc. *Location Module:* Detailed geographic and other information, may later include a route planner. *Network Module;* Software extensions to manage the linking of machines to a server. *Notepad Module:* For the storage and retrieval of messages and reminders. *Payroll Module:* SSP/SMP calculations, payslip printing, reports and analysis. *Policy Module:* Online company policy can improve customer/supplier relations and keep staff in touch with management.

Rental Policy Because of the changing nature of accounting practice and peripheral activity, we feel that modern computerised accounts systems should be continuously managed to provide an efficient, up to date, business tool. We also feel that programmers like ourselves should have a long term vested interest in keeping accounts software up to date so that your business is not left high and dry by changes in government policy.

The core system is therefore rented for £1 + VAT per week on a yearly subscription. This means that if your business fails then our income suffers! If you don't already have Superbase Professional 4 then we will provide it for £130 + VAT. The materials involved cost £20 + VAT. The optional modules will be rentable when they become available. Please call about overseas carriage charges.

The Counting House is, by its nature, continuously changing. Please check the availability of items before ordering. Upgrades will be available for £10 + VAT at any time within the rental period.

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Midi muddle

...you offer me some advice on con...g a suitable Midi keyboard to my ...'s Midi ports? My keyboard has ... in and Out, so I've connected Midi ... the Out on CDTV, and Midi Out to ...CDTV's In, both with straight five-pin ...through connector leads.

...ching the keyboard to Midi mode ... loading up Sonix gives no errors but ... music! I can only assume a special ... is needed for the CDTV.

...spite this minor problem the CDTV ... proved great. You may like to know ... if you boot from AmigaDOS and ... the welcome CD disk it can be used ... any other drive as CD0:.

...As far as I can tell only 14Mb of space ...ed to hold all the welcome informa... What a waste of 526Mb!

Jon Hudson, Nottingham

...r problem seems to be a confusion ... Midi itself, rather than the con...ctors. Assuming Sonix has full Midi ...port (to be honest, I can't remem...er if it has), and there's nothing ...ng with either your keyboard or ...TV ports, then you're probably fail...g to assign patch positions to Sonix's ... tracks.

According to resident muso Paul ...tin, a Midi keyboard will not ...pond to Midi signals unless it is ...eiving information it can relate to ...own internal voices.

See your keyboard manual for full ...rmation on how its patches should ... set up and addressed by Midi ...ftware.

Power drain

...ve an A500 upgraded to Kickstart ... and an A501 memory expansion, ... interface and a Cumana external ...e. I will soon be buying a Supra ...XP hard drive with 1Mb RAM fitted.

- The hard drive comes without a power supply. Will my existing PSU be able to cope with this lot?
- Because of my using the hard drive, I presume both floppy drives will be empty most of the time. Is there any way I can stop them clicking? I used to use a program for this task, but it doesn't work with my Kickstart 2 ROM.

Gavin MacGregor, Epsom

You should probably give the Supra drive a try without an external PSU for a couple of weeks and keep track of any inexplicable guru alerts you experience in that period. If you have a few, you should buy the optional power supply.

It might be a good idea, as you have an external drive and a half meg RAM card, to go for the PSU from the outset, but if you fancy saving a bit of cash it'd be better to try it without one at first.

To stop your empty drives clicking, use the NClick program you'll find on this month's CoverDisk. It works fine on Kickstart 2 machines.

Recalcitrant RAM

After buying a second-hand A590 unit from a dealer in Southampton I was eager to use it. After about a week, I was looking through the large number of fonts on my A590 when I thought I would look at the startup-sequence using SID, which I found with a number of other utilities on the drive, and I somehow messed up the startup-sequence.

I have attached a copy of my old startup-sequence. The problem seems to occur when the Makedir command tries to create T, Env, and Clips directories in RAM:, so that my startup halts with the message:

```
Bad args. Makedir failed return code 20.
```

At this point I just type LoadWB and Endcli, but Workbench then loads without a RAM disk. What is wrong?

James Leech, Havant

From the startup-sequence you provided, it is clear that the problem lies elsewhere, and if I'm not very much mistaken, you'll find it lies in the L: directory.

This should contain a file called RAM-Handler, which is essential if you want to have a RAM disk available. Without this file, your Amiga will be trying to create a sub-directory in a directory (RAM:) which it cannot find.

To remove the problem, drag an old Workbench disk out of your disk box and use SID to locate the file and copy it to your hard drive.

Long tracks

I hope you can help me with a problem that has been causing me lots of sleepless nights. I tried to make a backup copy of my Skychase game and found that the new working copy didn't work. After lots of investigation and time I got a program together that read a track off the original disk.

I found that where all tracks were 3,080 or so bytes long, two were not. On cylinder 1 both sides, the track length was approximately 300 bytes longer. Also there is no data on these tracks, not even the usual 11 sectors and headers. In fact, the whole track was a continuous stream of X'AAAA's.

Obviously this is for copy protection, and while I accept that I cannot make a backup copy I would love to know how it is possible to get an extra 300 bytes on a track.

I Turner, Cottingley

The practice of forcing non-AmigaDOS formats onto a disk, such as the long track trick, has for long been one of the mainstays of the copy protection business, and one of the most common causes of the horrible crunching noises made by disk drives attempting to read the disks.

Unfortunately, I can't tell you how they force some tracks to go above the usual limit for two reasons. First of all, I haven't a clue how they do it and have no desire to find out, and secondly if I did it would be irresponsible of me to tell the world. Sorry, but that's copy protection for you.

Better display

I have recently bought a 14in AOC multisync monitor and am having problems with Productivity mode. The problem is that the top ten or so scan lines of the picture are being pulled to the left-hand side of the screen. Do you know why this is happening and what can be done about it?

I am also thinking of investing in a flicker fixer, and wondered if you could advise me on the one to get. Are flicker fixers hard to fit in an A500 Plus?

I have also noticed when changing screen modes that the Super hi-res mode says it requires bypassing the display enhancer. Are flicker fixers software switchable?

Chris Thompson, Orpington

Commodore recommend that Productivity mode is only used in conjunction with one of their own 1950 or 1960 monitors, and the screen warping you are experiencing seems to fit in with this.

It is more than likely caused by the Amiga's signal being slightly incompatible with the monitor, though it could be a problem with the monitor itself.

Have the monitor checked out by the dealer from whom you bought it, and if it works OK on PCs and other machines, then it's the Amiga's productivity mode video signal which is at

fault.

The best flicker fixer for the A500 Plus is the ICD Flicker Free Video card, which gives a superbly steady display, and can be boosted using the new ICD Preferences program.

The card is available from Power Computing (0234 843388) and is quite easy to fit, though you will have to open the Amiga and invalidate your warranty.

Old upgrader

I am a proud owner of an A2000 which I bought about four years ago, and although I am using Workbench 1.3, I still have the Kickstart 1.2 ROM.

I realise that most (all – Ed) new Amigas have been fitted with the 2.04 ROM and ECS, and I am now seriously considering upgrading my machine. Before I do, could you answer the following problems?

- My machine is a revision 4.3 A2000. Would it be possible to replace my old Kickstart directly with the new 2.04 ROM without modification?
- Which of the PAD custom chip set make up the new ECS, and can I upgrade my machine to the new chip set?
- Would upgrading my machine give me 1Mb of chip RAM?

K L Wong, Feltham

You should be able to carry out a simple ROM swap to upgrade to Kickstart 2.04 without any further modifications as the chip socket and the chips themselves have not changed in size, even on the new A600.

As for the ECS, you should be able to fit a Fatter Agnus (chip no 8372A) as long as your 4.3 board is a B motherboard and not an earlier A. You can check this by looking at the rear of the machine.

If it has a CVBS video out, yours is a B board and will accept the Fatter Agnus. However, you will still have to cut a track and adjust three jumper settings.

I would advise against this unless you are comfortable with electronics, but if you insist on having 1Mb chip RAM, a local dealer should be able to convert your machine for you. As for the rest of the ECS, Super Denise should fit OK, but the ECS Paula chip has not yet been released.

Not so fast?

I recently bought an A1500 with Workbench 2 and really enjoy using the new-look interface rather than the older 1.3 Workbench. However, I'd like to know how to use the Fast File System on floppies.

I formatted a disk using Super Duper v2.0, then copied my Workbench disk to it file by file and installed the disk. I then booted the disk and got errors after inserting the disk.

Is the FFS much faster than the standard file system? I use Fixdisk v1.2 which told me that the Workbench 2.04 disk was standard file system. I thought that Workbench 2.04 allowed FFS to be used on floppies, or am I mistaken?

D Bateman, York

Forget Super Duper when formatting an FFS floppy. It's best to use the standard Format command thus:

```
FORMAT DRIVE DF0: NAME "whatever" FFS
```

This will provide an FFS floppy reliably, if a little slowly.

FFS floppies don't access appreciably faster than SFS floppies. The main advantage is that you will have an extra 35k or so extra storage on an FFS floppy. Remember that Workbench 2.04 support FFS floppies, but that a 1.3 machine will not read them.

To answer your last question, Fixdisk 1.2 can be get the file system wrong on hard drives as well as floppies. My GVP drive is formatted in FFS, but Fixdisk insists on telling me that it's the old file system. Just ignore the program when it does this.

OU IBM

Having just bought an A500 Plus on the pretext of if being a birthday present for my daughter, everything seems so bewildering. This brings me to my main point. I am an Open University student contemplating one of the many computer courses offered by the OU.

However, the specification required is biased towards the IBM computer using MS-DOS. What's the best way to tackle the problem, both in terms of quality and price?

John Kenyon, Warminster

For your purposes, one of the hardware-based PC emulators would be best. The Vortex ATonce Plus is available from Silica Systems on 081-309 1111, and the KCS Powerboard is available from Bitcon Devices on 091-490 1919.

The Vortex unit would be best suited to maths-intensive applications as it has a slot for a maths co-processor, but the KCS board comes supplied with MS-DOS and fits in the trapdoor, so it won't invalidate your warranty unlike the Vortex which you'll have to fit by opening the Amiga's casing.

You pays your money and takes your choice, but one other possibility is the GVP ATonce-based emulator. This fits inside the GVP Impact Series II hard drive, which might be the best long-term solution if you will be using PC application designed to work from hard drive (as most of them are).

The GVP's only drawback is that it is expensive, so a KCS in combination with a cheaper hard drive might suit your pocket more.

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Horrendous HAM

After purchasing my Golden Image hand scanner and being very pleased with it, I decided to answer your cries for better pictures in the gallery, so, scanner in hand, I transformed an all-colour postcard of a beautiful white horse into a mish-mash of grey pixels.

Using these as an outline, I traced the horse using DPaint IV and cleaned it up. Then I changed the format to HAM mode so as to be able to use a heck of a lot more colours.

I set my palette using lots of ranges from black to white and grey to white, then began faithfully reproducing the colouring from the original.

I wanted to have a dark grey running into a light grey, so I did this carefully by changing the lightness of the colour as I progressed. Why then did I end up with such colours as green, blue, purple, and yellow?

The program obviously thinks that mixing light grey and a little bit lighter grey produces green. This is the only problem I have encountered with this wonderful program, and considering it's so wonderful it must be solvable.

Please tell me how! I'm a desperate man, and if I can't sort it out there'll be no horsey for the Gallery. Gutted, huh?

Joel Carpenter, Duxford

HAM is supposed to stand for Hold And Modify, but in practice it means Headaches And Migraines, because this is what you'll get if you have to do a lot of converting to and from HAM.

Retaining your old palette is virtually impossible when converting to HAM, and tweaking a 4,096 colour range is a royal pain in the you-know-where. I would advise you take the original scanned image and load it into DPaint IV HAM mode and work on it from there.

If you still have problems, load the image into a 64-colour screen, save the palette (Colour/Palette/Save), then go to a HAM screen and load the palette in. You'll only have 64 colours, but you can use the spare palette ranges to create as many new colours as you'll need.

I'm not an art expert, so these "solutions" might be less than ideal. If any of our readers has a letterful of DPaint palette tips they'd like to share with the rest of us, I'd be glad to print it, so get scribbling all you Leonardos.

Beginners' Guide – a problem solved

For all of you who wrote in with the following query, we have an answer.

We told you to copy LIBS:Icon.library to MyDisk:Libs to get over the problem of Workbench not loading on the tutorial disk. What we should have mentioned was that this is only necessary for users of Kickstart/Workbench 1.3 owners, as Icon.library is built in to the 2.04 Kickstart ROM.

Sorry for any confusion this may have caused, folks!

The word game *part 1*

Stevie Kennedy takes a closer look at the mystical world of publishing with your Amiga

After last month's DTP feature, you might have come to a decision on the DTP package that's right for you, and you may even have decided that you've got all this publishing stuff down pat.

However, when it comes to actually printing the documents you've created on your Amiga, you soon realise that the complicated world of publishing is just beginning.

In this mini-series, I hope to cover some of the more ankle-wrenching potholes you might encounter as you struggle towards the printed word, in the hope that some of the confusion and unnecessary bumf surrounding the world of DTP can be dispelled.

A tall order, perhaps, but as long as you can shut out of your mind the garbled jargon and plethora of pseudo-scientific terms seemingly designed to keep publishing a closed shop, the printing process can be reduced to an exercise in common sense.

For the average Amiga owner struggling along with a 24-pin or bubblejet printer whose requirements from a print job are fairly modest, a great deal of the high-end terminology and technology can be binned from the outset.

Attractive

This is especially true if you cast about a bit and find a local print shop where good old-fashioned printing can be had with the minimum of fuss and at very attractive prices.

I settled on the Keele University Students' Union print shop. Near the potteries in Staffordshire and run by the ever-smiling Pat Borsky, it's a a haven for frustrated publishers.

Unless you are determined to go all the way to full colour glossy magazine printing, this is exactly the sort of print shop you should be looking for.

Pat and her team use an offset litho printer to produce everything from admin material and the on-campus magazines for the students' union to advertisements and flyers for local businesses, so they cover most of what an Amiga owner might want.

Local print shops in areas all over the country should do likewise if you're not located close to Keele. The process is simple. The Amiga user produces a document on his or her DTP package and outputs it to printer at the best resolution possible.

If you have a decent 24-pin printer or bubblejet, you should get good enough output for fanzines and the like, but for a more professional look it might be best to have the document laser printed.

This will mean printing your work to disk as a PostScript file, then transferring it to an MS-DOS disk (using the MultiDOS utility on this month's disk) so that a high street printing service can download it to their laser printer. Once your work is on paper, especially if printed by a 300dpi laser, it will be "camera ready".

The print shop can then make a printing plate directly from the page by photographing it to make an electrostatic negative on either paper or metal.

Paper plates are cheaper but can be used only once for up to about 2,000 copies of a document. Metal plates cost between £8 and £10 per page, but as they are more durable they can be used indefinitely.

Which plates?

It follows that if your document is a one-off affair, you should stick with paper plates, but if you are printing letter heads, business cards and so on which might not change for years, go for the metal plates and when you go back for reprints you won't have to pay a second time to have plates made.

Including photographs in your document needn't be too expensive either. If you haven't the cash for a scanner, and don't have access to one, you can usually instruct the print shop to have photographs screened, for which service they'll charge about £12 to £15 a time.

Screening is the process whereby an image is scanned and broken down into halftones for the printing press to deal with.

Halftones are just a series of larger and smaller black dots in varying densities which are used to represent lighter and darker shades of grey.

You will see the process in operation on newspaper front pages every day, and most cheap hand scanners will produce a halftone image for this sort of mono printing process. It goes without saying that if you're going to produce a fanzine or newsletter with several photos in it, you would save a lot of money by investing in a cheap 400dpi hand scanner.

Things become a little more complex and expensive when you start to look at colour printing, but the principles are the same. To print a basically black and white document with just the odd spot of colour for logos, special offer flashes, and so on, there are only a few extra steps to take.

Simply design your page as normal, use two or three colours where needed, then print the document using mechanical separation. Most decent DTP packages support mechanical separation, which is just the process of printing a page once for each colour used on it.

Coloured bits

The black and white elements of the page print as normal without the colour parts, then a fresh page is printed for each colour in which only the coloured bits are printed.

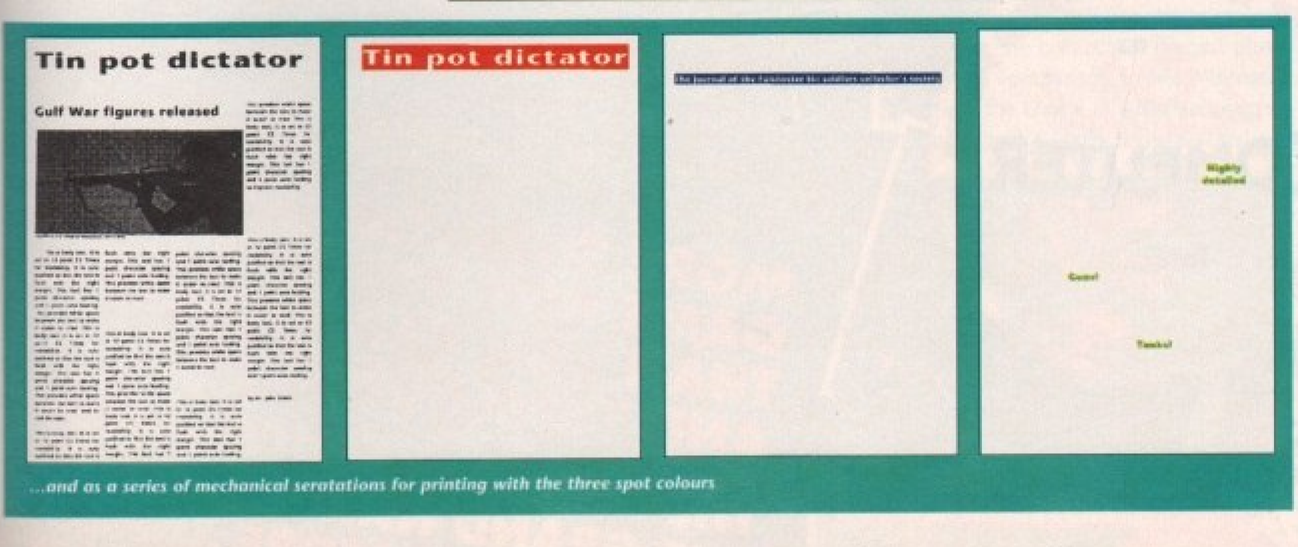
This produces a set of three or four camera ready pages which are made into separate plates. When the document is printed, the mono (black and white) plate is printed first, then the printed pages are put back in the printing press to have the colours printed on one at a time until the full page is complete.

Using spot colour in this way, you can put together a document every bit as colourful as a local newspaper, and of much the same quality as long as you have a PostScript-compatible DTP package and access to a laser printer.

The process is relatively painless, cheap (at Pat's rates you could have 2,000 pages of double-sided A4 printed in three colours for quite a bit less than £100), and what's more it is accessible to human beings who don't speak the litho lingo. AC



The newsletter as it appears on the screen...



...and as a series of mechanical seratations for printing with the three spot colours

Next month

A look at the more upmarket printing processes, why and when you should bother using them, and how much they cost.

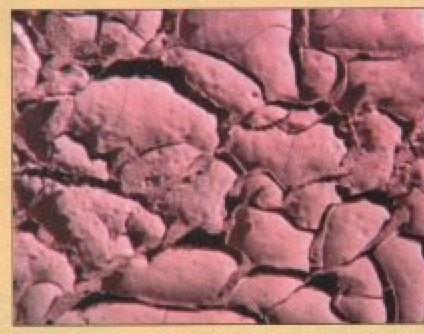
Can you feel it?

Paul Austin, texture tester extraordinaire, pins two of the Amiga's latest texture collections to the canvas

If you're a regular reader of the Updates column you may already be aware of *Alternative 3D Textures* from Alternative Image, which has been on the drawing board for a while and has now arrived in its final form.

Our second contender in the battle of the texture collections comes from Activa – the company responsible for Real3D – and is called Texture City.

Texture City



As opposed to the Alternative collection, Texture City's assortment come with only one version of the image which you can then manipulate yourself, given the necessary software.

Again unlike the Alternative set, the images themselves are provided in the Jpeg format which drastically reduces the storage space required for each file.

Unfortunately this means that each image requires decompression prior to use and as a result there is a tendency for slight image degradation.

The collection comes on either disk or CD-ROM, along with its own installer which takes the liberty of installing miniatures of all Activa's available images in the various collections while adding the decompression utility onto your hard disk.



The images themselves are impressive and a good deal more varied than the Alternative collection, but with the cheapest set retailing for the £99.95 for 15, and the most expensive 60-image set at £250, Texture City is strictly for the very serious, or very silly...

Two examples of Texture City's 24-bit extreme overscan images

Alternative 3D Textures

Alternative's collection has hit the streets as a 12-disk set, plus an additional two free disks packed with assorted Real 3D animation files, tutorial images and example textures. We'll return to the freebies a little later, but for now I'll concentrate on the 12-disk texture collection itself.

As you might expect, the included images are impressive, as indeed are those of the opposition, especially when viewed in their 24-bit form.

However, it's Alternative's variety of image formats that may make them attractive to more than just the ray tracing community.

Unlike the Texture City collection, Alternative have put a little more thought into their compilation, and rather than a straightforward selection of 24-bit files, each floppy contains a single image which appears in a variety of formats.

To the 24-bit ray tracing purists, additional lower quality images might be of little interest, but as the Amiga moves ever closer to the roll of a multimedia workstation the ability to access a file in a variety of formats becomes ever more important.

The beauty of multiple format is continuity, a commodity which makes the seamless combination of multiple applications much easier. It's true that anyone with a copy of ADPro and a 24-bit image can create their own variations, but that's assuming you have £250 spare for the processing software.

Each Alternative disk contains the original 24-bit texture (400 x 400) plus a Ham (320 x 512), an eight-colour IFF (640 x 512) – suitable for Scala backdrops, a four-colour greyscale (640 x 512) – ideal for either bump mapping in Real3D or altitude mapping within Imagine.

As mentioned earlier, the collection comes with the added bonus of two tutorial disks for Real3D which I must admit are an impressive sweetener.

The disks contain tutorial images showing how to apply various textures plus mapping information so you to can achieve effects such as clip mapping, chrome, spiral wraps and so on.

Aside from basic tutorials, the disks also contain animation files which will automatically recreate the images and environments shown in the tutorials, the most interesting of which has to be the water effect which can be seen in our example.

Conclusion

The Alternative collection has a lot in its favour, not least its price. At less than half that of the cheapest Texture City collection for only three images less, it's a comparative bargain, plus there's the added bonus of the Real3D tutorial disks.

On the down side, there's no support for DCTV Display files, which considering their relatively small size and obvious appeal to the average user has to be a big mistake. The only other cause for concern is the somewhat less-than-video-spec image size on the 24-bit images themselves.



A classic example of the four images waiting on every Alternative disk

Scan the classifieds...

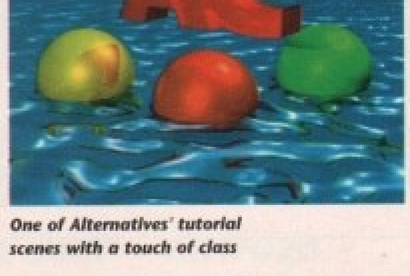
If you're serious about Amiga art and can handle a camera it might be well worth investing in a JX100 scanner. At around £500 it's a big investment, but at these prices it could soon pay for itself...

The Alternative collection are primarily wraps while the Texture City images are more akin to backdrops, hence their full video spec hi-res interlace with severe overscan.

The main flaw in the Texture City sales pitch has to be the price, with even the cheapest collections coming in at a frightening £99.95 for just 15 images.

The second problem is that of inflexibility. If you're planning to invest, it's safe to say that a copy of ADPro is a near essential, along with a sizeable hard disk to store any decompressed files that you plan to employ.

Perhaps the collection's biggest plus is variety. In comparison to the Alternative selection, the choice of available images is immense, and if you're a professional user who doesn't consider price his or her prime consideration, the option of hundreds of images as opposed to 12 could be the deciding factor.



One of Alternatives' tutorial scenes with a touch of class

For we mere mortals, the most interesting set in the Texture City collection is that of 40 images in either Ham or DCTV Display format.

Still at Activa's favourite figure of £99.95, they're far from cheap, but in comparison with the Alternative collection they nevertheless win hands down image per pound... AC

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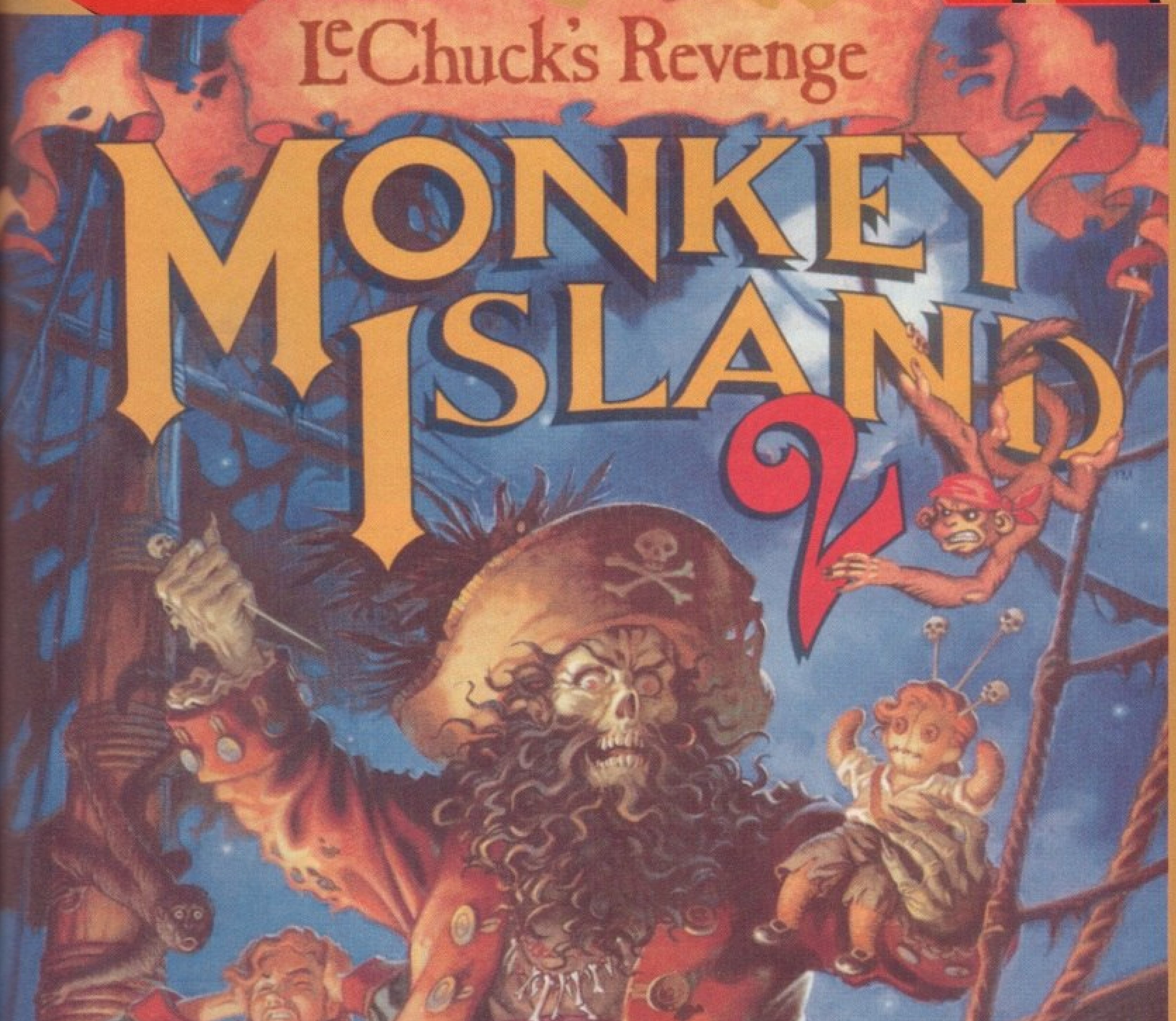
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ISSUE ELEVEN ▪ AUGUST 1992

GAMER



REVIEWS... THE ADDAMS FAMILY • SHUTTLE • JAGUAR XJ220 • SIM ANT • JIM POWER • AND MORE!

ALSO... CHEAT MODE • TALKING SHOP • ONWORD •

▪ ▪ THE UNSTOPPABLE GAMES MACHINE ▪ ▪ ▪

ONword

Other games sections can leave a chalky taste...

Carry On Campaign

Good grief. Yet more news from Empire down in steamy Basildon. Empire, it appears, are planning to release something in the region of six million games over the summer months.



They also keep sending us sweets for some bizarre reason. Oh, and today we got a water pistol. And some Chewits. Hmmm.

We also got some news on another of their forthcoming war games, Campaign. It's set in the Second World War, and features lots of tanks. Just like Pacific Islands. But whereas 'Siffic Islands was a simulator, this is a strategy game.

Apparently the game map is large enough to include "most of Europe", so it may be a little on the large side. It'll be ready for public consumption in September at the not unreasonable price of £29.99.

Kermit and killers

For a software house that's only had two full-price releases, Team 17 have got a bit of a reputation for being disconcertingly good. In fact, they're a bit like the Bitmaps (but without the stupid shades and glum faces).

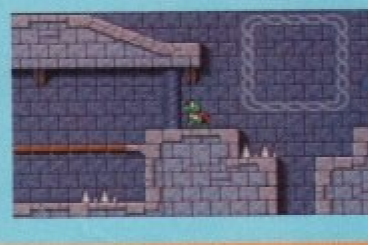


Alien Breed was, and indeed is, a bit of a sexpot, and Project X is still getting a good pummelling most lunch times here in the Europress fortress.

And, joy of joys, the Teenies (as we like to call them), have got not one new release, not three new releases, but a nice round two new releases "on the cards".

First out of the gate is Superfrog, a cutesy platform game, featuring 24 levels, wazzy graphics and Spud n' Dudley, "Superfrog's wobbly mates".

Also, rumour has it, there's going to be sampled speech courtesy of Britain's top light entertainer and clock mender, Vic Reeves. But don't quote us on that. Biff probably made it up. And then, many light years away, in the Autumn we've got Assassin. Again, this promises all sorts of technical trickery including over 200 frames of animation for the main character alone. Zoiks. "Assassin will become an Amiga classic" boast the Teenies.







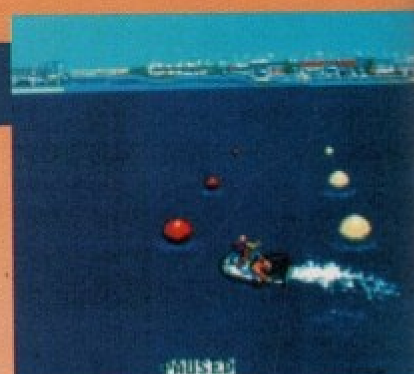
100% Pure adrenalin

No it's not a Point Break game (although that's not a bad idea, eh software people?), it is in fact the "long awaited" sequel to California Games. Called, by a strange quirk of fate, California Games II.

It features the following non-bogus and, like, totally gnarly events – hang gliding, jet surfing, bodyboarding, skateboarding and, er, snowboarding.

Quite how snowboarding fits in with all the other beach games, we're not quite sure. Bit spooky, eh?

The usual multi-player option is there so you can hang ten over the local dudes in a, like, totally bitchin' style. Er, rad. Or something. US Gold are the peeps to thank.



talking shop

ELSPA PENGUIN CHARTS

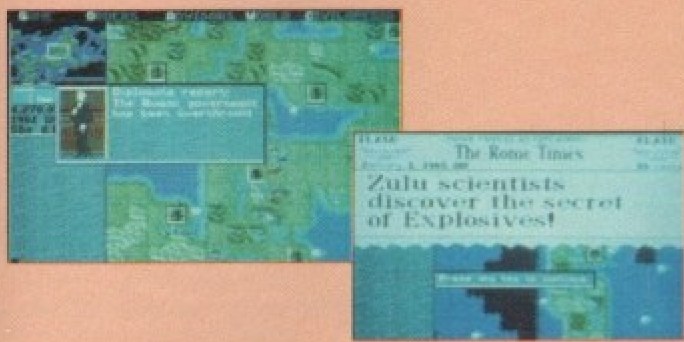
This month		Last month	Title	Publisher	Price
1	▲	NE	Epic	Ocean	£29.99
2	▲	U	Monkey Island 2	US Gold	£37.99
3	▼	D	First Division Manager	Code Masters	£7.99
4	▲	NE	Jaguar XJ220	Core Design	£25.99
5	▲	6	The Manager	US Gold	£30.99
6	▲	NE	John Barnes Football	Krisalis	£25.99
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9	▲	12	Eye Of The Beholder 2	US Gold	£35.99
10	▼	3	Project X	Team 17	£25.99
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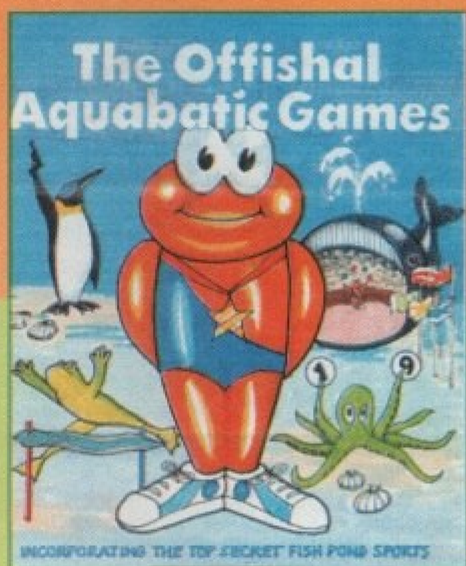
Get civilised

Ever fancied forging the very society we live in? Founding and renaming all the towns and cities we know and love? Beating up lots of Belgians? Well good news my xenophobic friends, for Sid Meier's Civilisation is coming to the Amiga courtesy of Microprose.

He's the same bloke who gave us Railroad Tycoon, and most recently, Covert Action. Not surprisingly, the PC version of Civilisation scooped the Most Original Game award a few months ago at the ECTS show.

We've had a bash at the PC version, and it really is an ingenious little thing. Any game that lets you tell Napoleon to sod off has to be worth a look. Hopefully, we'll review it next ish.





More sports?

Yeh, more sports games. However, by far the most interesting we've heard of is Millennium's third James Pond game. Entitled The Official Aquabatic Games, it adds a moist and slightly salty slant to the upcoming deluge of sports games.

Er, that's all we know actually, but being big fans of the Titanium Trout we thought you'd like to be warned. And while we're on the subject of Millennium, they've got another sequel planned. Well, sort of.

Remember Robin Hood, that rather nifty little 3D adventure from last October? Well the same bloke who designed that has been hard at work polishing the game engine up for an even bigger game.

Rome is the title, and it sounds like an absolute killer, featuring locations as far afield as Britannica, Egypt and, of course, Rome. Start out as a slave and work your way up to Emperor.

Orgies, wine and well-fed lions should all be coming to your Amiga in September, so get watching those Up Pompeii videos now.

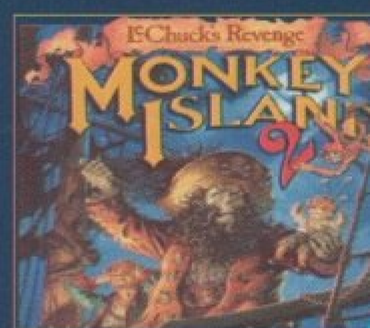
THE CREAM TEAM

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smirking at trams - daniel "catfish" whitehead
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GAMER
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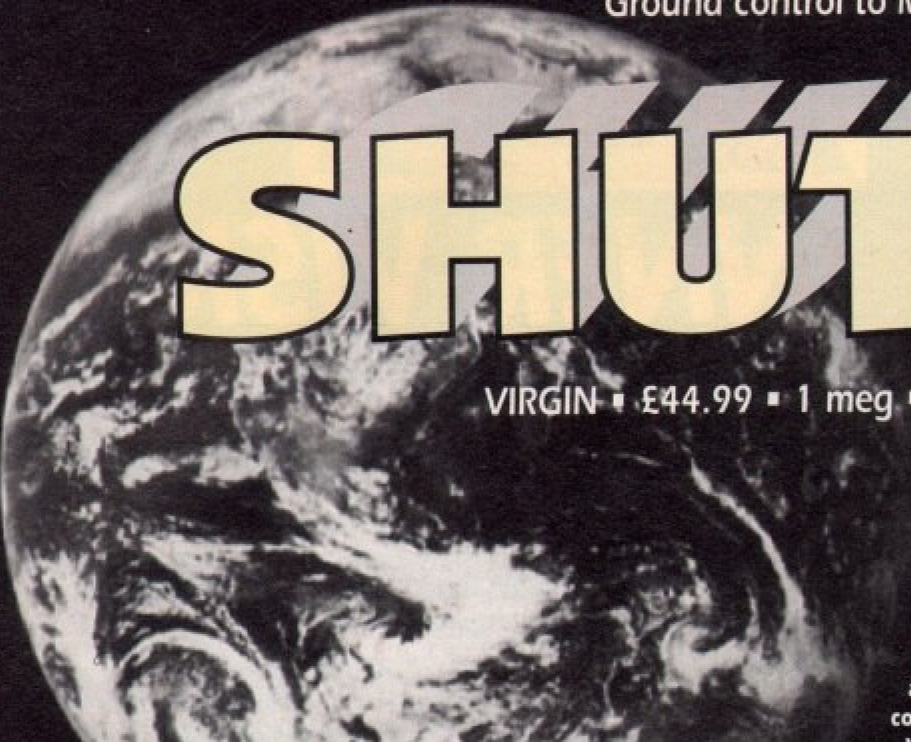
Distinctly cabbagey...

REVIEWS



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SHUTTLE

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Life can sometimes be quite startling, can't it? Why, only the other day I looked in my rear view mirror at some traffic lights, and saw none other than Inspector Morse in the car behind.

Well, OK, it wasn't really Inspector Morse. He was driving an Austin Allegro for one thing. And he had red hair and a beard. But the initial similarity was quite alarming.

Then there was the time when I dialled a wrong number and accidentally rang up Mother Theresa.

"Hello," said I, "Is that Mr Crispies Dial-A-Pizza?"

"Do you know what time it is?" grumbled an old lady's voice.

"You mean this isn't Mr Crispies Dial-A-Pizza?" was my reply.

"No, it's flippin' Mother Theresa" said the voice and hung up. Uncanny, eh?

But these startling events pale into insignificance alongside the sheer palpitation-inducing sight of the control panels for Virgin's Shuttle game.

The game comes with a poster-type sheet which shows you all the dials and switches for easy reference, and it could quite easily double as a three-man tent. It's big. And perhaps the most terrifying sight I've ever seen.

Shuttle is perhaps the most detailed and in-depth sim ever in the entire history of the universe. Every single knob and switch that's in the real thing is lovingly recreated here. Well, probably, I'm not about to start counting them. The reason for this is that the shuttle is a million times more complex than any aircraft and so needs squillions of controls to prove it.

You can't just open the doors up in space, y'know. Instead you have to activate all the relevant motor mechanisms, seal valves and other techie-type things. If you didn't do that then the whole shuttle would be de-presurised and all sorts of nastiness would ensue.

And yet despite the unprecedented hugeness of it all, it's not that difficult to get into. 'Tis true. The programmers have thoughtfully included a load of helpful features to show you the ropes.

Because, let's face it, even the most experienced flight sim addict would be entering stormy waters with this game.

So, you can redefine loads of options to suit your experience level. If you don't want to go through all the pre-flight palaver (about three hours of checks and initialising booster rockets, although thankfully not in real time) then you can start the mission actually in orbit, or skip straight to the end and just land the thing.

You can also have plenty of help during the mission. On the easiest help level, the computer shows you exactly what to do and which buttons to press so there's really no way you can go wrong.

As you get better and start to remember what buttons do what, then start to reduce the Help level and slowly set out on your own. Me? I'm still clinging to the help option for dear life.

But even so, there's an incredible feeling of achievement as you start to see the shuttle responding to your commands. Even the most difficult missions can be carried out with the computer leading the way so anyone should be able to get something done.

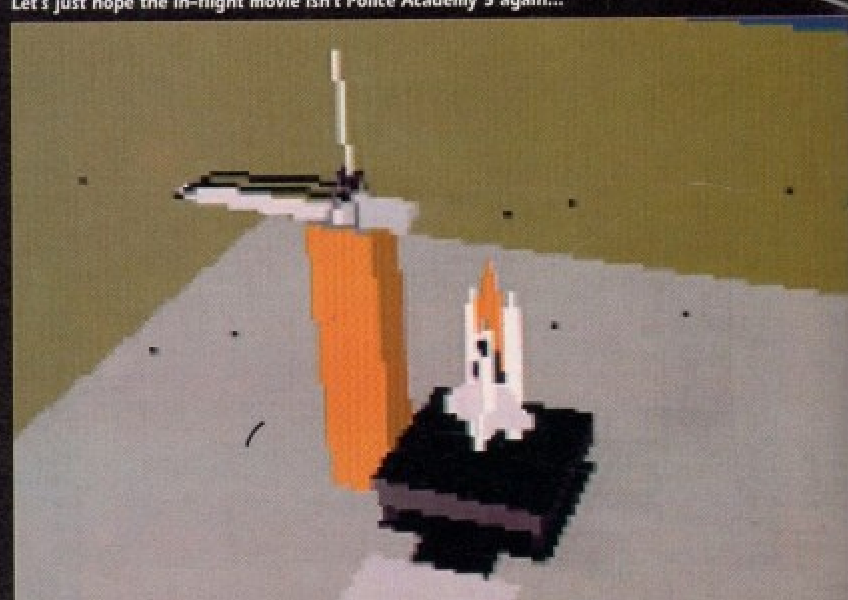
The missions are all either based on



Just one section of one close up of one of the control panels. Scared yet?

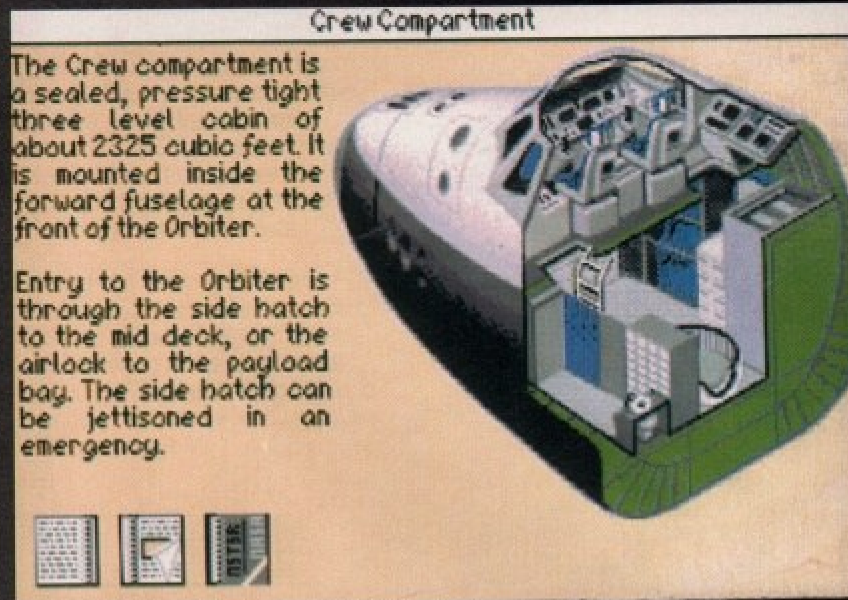


Let's just hope the in-flight movie isn't Police Academy 5 again...





Where's the stereo? Where's the stereo? And what does this big red Abort button do?



My goodness, more trivia than you could shake John Craven at

real shuttle missions from the past, or speculative ones based on current technology. So you could recreate the very first shuttle test flight, or launch the hilariously crap Hubble telescope, or even take part in a space station project. Wowsers!

With a game of this size, you'd expect it to come on about seven disks and for everything to trundle along at a speed not unlike Dougal from the Magic Roundabout. Well, two disks is all it takes and the graphics are smooth and detailed. Especially nice is the way you can watch Earth slowly revolve beneath you. All the continents go past and night and day light up the planet just like real life. The "feel" of being in space is astounding. I'm sure it's really good for your karma, or something. Dead peaceful.

The weird thing is, there's no clear objective to the game. There's no overall goal other than the ones you set for yourself. Maybe you won't sleep until you can launch a spy satellite all by yourself without any help at all, or perhaps you'd be chuffed to just land the shuttle without crashing. Either way, it's a great way to spend a few hours.

Yep, a few hours. Shuttle is not the quickest game in the world. The 3D and so on is very smooth and fast, but you can't just zip into orbit, dump a satellite and nip back again. Everything takes a while in space, so this is not a game for those who demand constant excitement.

Or indeed, any excitement at all. Shuttle is not an exciting game, it's an intriguing and demanding simulator. It's not even a game as such, more like a learning experience.

You constantly get better at following the mission instructions, and should eventually be able to go from one control panel to the next flipping all the right switches. The question is, if you can master this game, would that mean you could fly the real shuttle? Why not give NASA a ring and find out?

So, if you think you've mastered every flight sim on Earth, then try this one and really test yourself. Not for the faint-hearted, but those brave – and rich – enough should find more than enough to keep them busy.

Daniel



I hope you, ahem, "pointed percy at the porcelain" before you set off. There's no motorway services in space y'know

VISION GGGGG
Realistic "space" feel, and a suitably detailed shuttle.

AUDIO GGG
Well, space isn't exactly the noisiest place to be, is it?

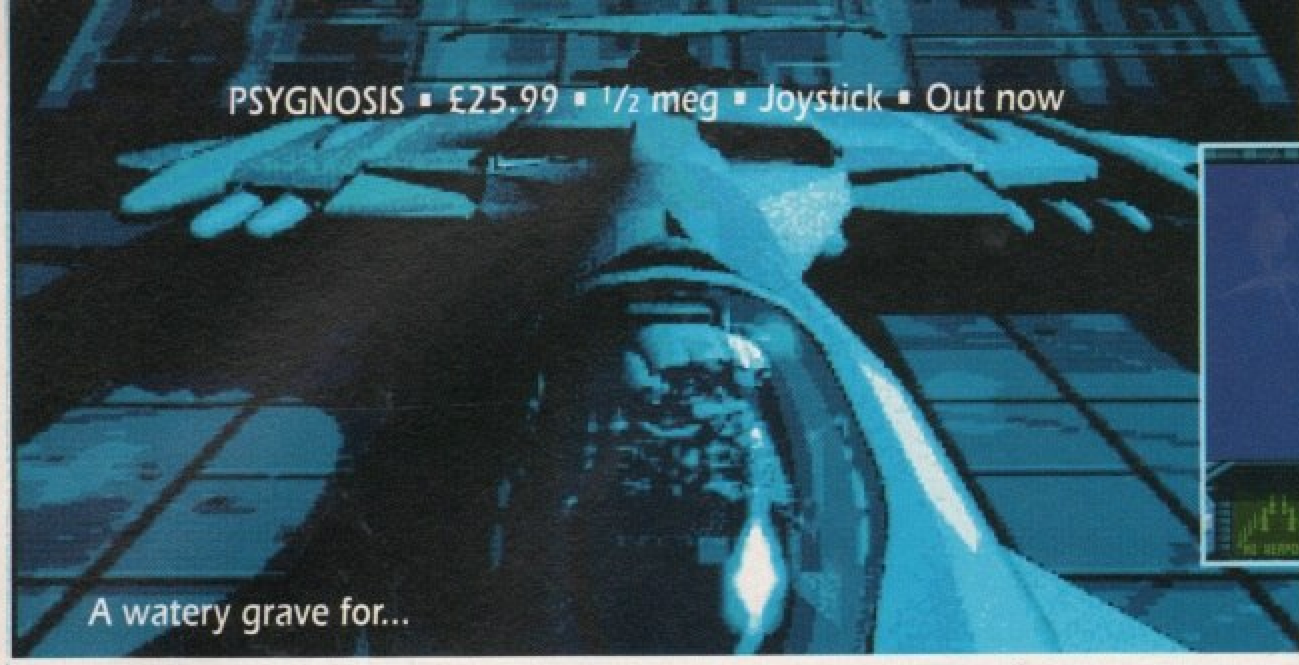
PLAYABILITY GGGG
Not that hard to get to grips with, so anyone can have a go.

ADDICTION GGGGG
The ultimate challenge for sim fans everywhere.

92%



Captain, there's an unidentified step ladder approaching





This is a solar panel. Shoot them all and you can go on to the next level and shoot more of them. Woo

AQUAVENTURA

Stingray, stingray, diddle der der der dah. Possibly the best theme tune of all time, I'm sure you'll agree. And not a bad programme either, when you think about it. Admittedly, it was just Thunderbirds with a fishy tang, but it was still a right royal stonker of a programme.

The latest game from the Psygies has a distinctly fishy tang as well. And there's good news and bad news. The good news is that another of those pesky nuclear holocaust things has devastated the planet, as nuclear holocausts tend to do.

The remnants of mankind have taken to hiding under the sea in colonies, linked by under-sea tunnels, as the sea is too full of radiation for safe transit.

The bad news is that the Spurcians have got their beady eyes on Earth and have taken over all the colonies, infested all the tunnels and stolen all the beer. The last remnants of the human race flee into space and start plotting how they can get rid of the Spurcians. Now as any great tactician would tell you, the best way to defeat an alien invasion force is to send out a solitary ship with the puniest weapons imaginable. So that's what mankind does.

And in true arcade story-line style, no sooner has our lone hero blasted off than the spacecraft containing the last people alive explodes and leaves him all alone. So, he scowls, swears and sets off on a mission of vengeance. Yowsers.



A pyramid. One of the few interesting structures you'll fly past

It's a sort of 3D shoot-'em-up. A bit like Afterburner meets Starglider, but it somehow manages to avoid the good points of both. It's lacking the simplicity of Afterburner, and the depth of Starglider, lurking instead in a no man's land between the two.

"The game of the decade" proclaims the box. Fib Central, kids. Aquaventura has been in development for years. Yonks and yonks. And yet with all that time, the game still manages to be a horribly shallow, and disappointingly tiny little thing.

But first, let's look on the bright side and pick up on the good points. Unsurprisingly, it's got all the usual Psygnosis frills and shiny bits. Smooth and fast 3D graphics, great tunes and FX and the best intro since Beast 2. It's just a pity that the game doesn't quite match up to the standards set by the presentation.

For a start, there are only eight main levels and they're all the same. In each level you've got to shoot all the solar panels before you can attack a pyramid which leads on to the next level. The only difference is that the higher the level. The more solar panels you have to shoot.

Each level is linked by the undersea tunnels, which are shown in wireframe 3D and are totally confusing. They're fairly pointless, other than to pad out the game a bit.

At the end of each level, you get refuelled, your missiles are restocked, you get your energy back and an extra weapon is installed.

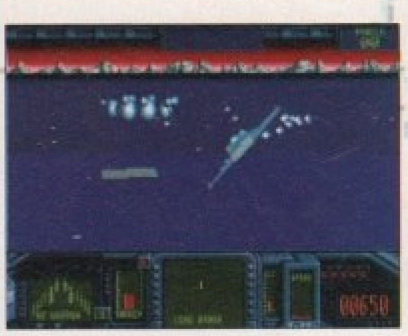
Your extra weapons are activated by pressing the spacebar, but I'd advise you not to. For ages, I kept running out of energy and dying without anything hitting me.

I finally figured out that it was my extra weapon that was draining my energy, a fact mysteriously missing from the manual. Oh, and you only get one life. Mucho crapola, señor.

Given the amount of time that this game has been in production, it's ridiculously weak. On my fifth go, I reached level four – that's half-way through the game, fact fans – and was getting fairly sick of playing the same level over and over.

And so would you be, especially after paying full price for it. Watch this one sink without a trace. Very poor indeed.

Daniel



Someone's been watching too many scrolly demos, haven't they?



Whaaaaaat?!? My thoughts exactly

VISION

Great intro, but couldn't we have some variety in the levels?

AUDIO

Good tune, the usual blasting FX

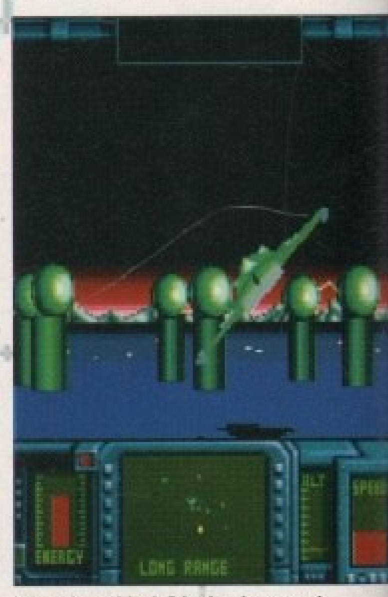
PLAYABILITY

Simple to grasp, but very boring after a while.

ADDICTION

You'll either finish it or burn the disks within two hours.

51%



What does this do? It sits there, and crackles a bit. OK?



Here we are, Chez Ánt. The big one's the Queen and the green blobs are food. Make yourself at home...



It can get a bit stuffy living in millimetre wide tunnels, so why not pop upstairs for a stroll?



My spooky insect sixth sense is tingling. There's danger nearby... but where?



Those dandy highwaymen of p

SIM A

OCEAN ▪ £34.99 ▪ 1 m

Here's a question for you. Which species on this planet is stupid enough to wage war on its own kind, use chemical weapons, live in a fascist social hierarchy, use children as labourers and capture enemies to use as slaves?

Well, OK, it's a trick question. There's actually two species who do all of those things. One of them's us. The others are ants. What a lot of silly billies eh? Mind you, even the ants don't have Simon Bates. Only we could be that stupid.

So, ants aren't quite the harmless little chappies you thought they were. And this game could show you exactly why. In it you'll take the role of a whole nestful of ants, and you'll have to waddle about being generally ant-like.

If you play a quick game then the objective is just to build up a nice big nest and kick seven bells out of the poncey red ants. In a full game you've got to take over a back garden, move into the house, drive the people out and take over the entire world. Ha ha ha ha ha ha ha!

Or if you fancy a bit of Open University-style studying, then you can play an experimental game that lets you build a nest to your specifications and then watch it evolve.

Sounds a bit deep, doesn't it? Well, it is written by the same rock 'n' roll rebels who gave us Sim City and Sim Earth. Options and choices all over the place basically.

Whichever game type you're playing, the basic controls are the same. You're initially controlling one ant, who appears in yellow rather than the drab goth black outfits of his pals.

You use this ant to carry out more direct actions, such as exploring and digging tunnels. But by using the menus, you can set all the ants not under your direct control to do other stuff like fetching food or looking after eggs.

If you click on our yellow friend, you get a sub-menu that allows you to recruit other ants who will then follow you around – handy for attacking red ants' nests – or switch direct control to another ant.

Your priorities are to keep your nest stocked with food, with plenty of room for all the other ants, and to keep the Queen ant alive, 'cos without her there won't be any more baby ants.

You can also leave pheromone scent trails for other ants to follow, so you can lead them home, lead them to food or tell them which bits of your territory to guard.

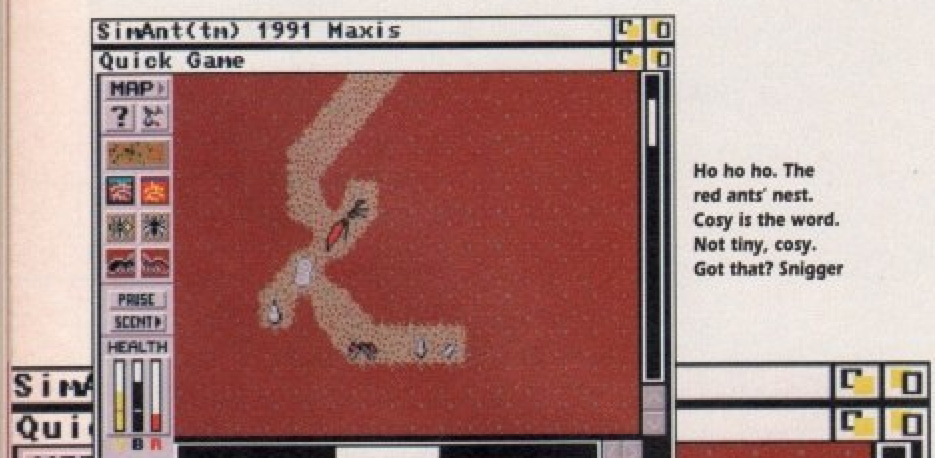
However, ants being what they are, things don't go easy. Despite your best efforts, attacks from predators are bound to occur. Great big spiders scuttle about and eat all the poor little ants.

Horrible lion ants hide in fake nest entrances and eat all the poor little ants. Plus, you get stupid people lawnmowering you to death, or spraying you with chemical insecticide. What a cheery life, eh?

Given a bit of luck and a lot of planning, you should eventually be able to get all your soldier ants to follow you into a do-or-

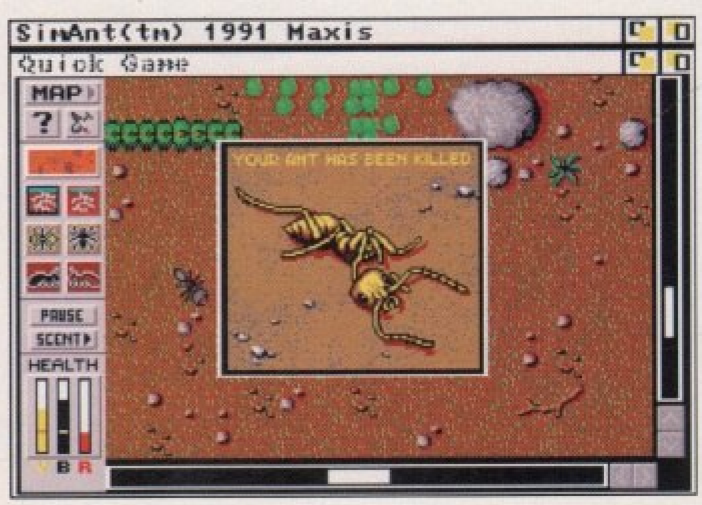


As the 16:30 Caterpillar to Patio Central steams past, our ant chum ponders over whether he should dive into that lion ant's mouth

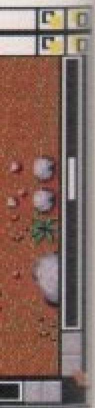


Ho ho ho. The red ants' nest. Cosy is the word. Not tiny, cosy. Got that? Snigger

Those bonkers speech bubbles. Just wait till they discuss the role of symbolism in 1920's Spanish theatre. It's a gas!

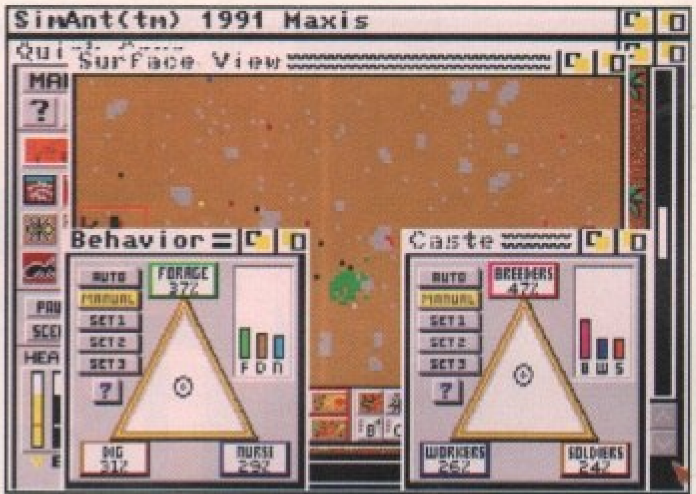


What does the Pink Panther say when he steps on an ant? (courtesy of the Crack-a-Joke book)





The map. Well, it is a metre square patch of someone's back garden. What did you expect?



These chirpy little pyramid affairs allow you to determine the ants' behaviour and social status

VISION

As exciting as the subject matter allows, with some welcome humorous touches.

AUDIO

Good, if not entirely relevant, music and a couple of FX.

PLAYABILITY

Surprisingly easy to get in to, thanks to a very user friendly approach.

ADDICTION

Loses its appeal fairly quickly, and it gets too repetitive too soon.

76%

hwaym... of pop are back



ANT

9 ▪ 1 m... Mouse ▪ Out now



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...die attack on the red ants' nest across the patio.

Charge into the enemy nest, find the red Queen and kill her and you've beaten the gits. If you're playing a quick game then that's it – if you're playing the full game, then you move on to a new patch of garden. And you keep doing this until you've achieved total suburban ant bliss.

Well, that's the bare bones of the game. But just how exciting can a game about ants be? Unfortunately, the answer is "not very". It's an incredibly brave and original idea, but I found it very hard to actually get involved in it.

It's great fun to wander about the game for an hour or so, discovering all the little quirks of ant life (hey! it's educational, kids!) but as an actual game it gets fairly repetitive. Dig nest, get food, reproduce, raise army, attack red ants. And so on.

The graphics are great, with all the different types of ant looking suitably, erm, different and the predators look really nasty, especially the gargantuan spider.

Even the sound is good, despite the fact that ants aren't known for their musical tastes. So you get bouncy tunes, including a fanfare if you take on the role of Queen, with some functional FX.

There's also a brilliant "silly" mode, where all the ants, eggs, and predators keep talking in speech bubbles. So the spider walks around telling everyone how cool he is, while the eggs wonder why it's so dark. And in battles, all the ants call each other names. It's totally pointless, and of course, totally excellent.

The "silly" approach is mirrored in the stonking manual, which covers not only how to play the game, but also gives you a fairly detailed run down on ants in general, illustrated by cartoons and text book diagrams with silly speech bubbles.

This makes the 176-page tome a lot easier to consume, and gives the game a more approachable feel. And if after reading the manual you still feel stuck, then there's a step-by-step interactive tutorial to have a play with on-disk.

It's just a pity that the actual game is so uninspiring. Hardcore insect fans, or slightly eccentric strategy fans, will probably take it to their hearts, but I couldn't help feeling slightly disappointed.

At £35, rather than being bowled over by the ins and outs of insect life, I found that ants eat, have babies, have fights and then die. Just like us. Maybe that's the whole problem. A nice idea, but it just doesn't quite make it.

Daniel

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Panther
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–a-Joke

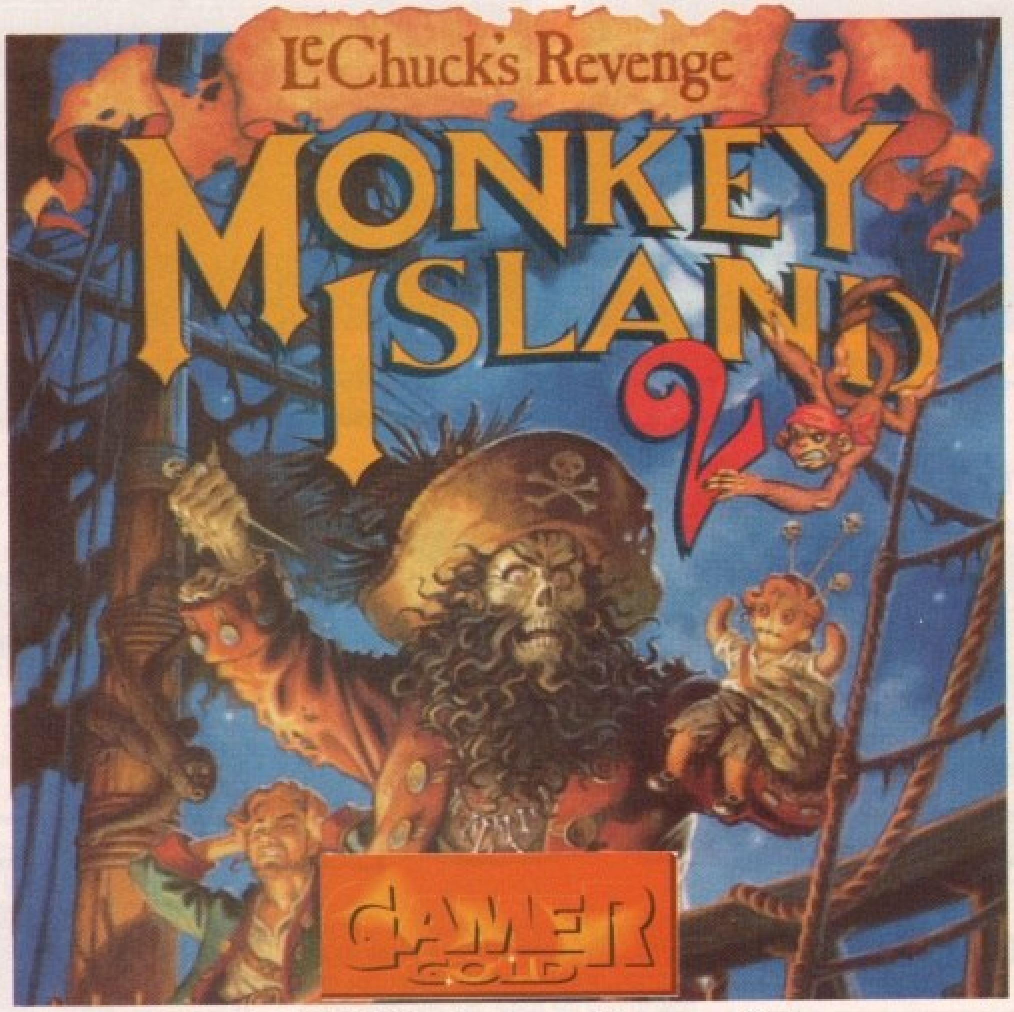


Yes! Hallelujah! I am risen! And I have seen the light! Let us all join hands and dance around the lilac toadstool of love!



What a gimboid. If anyone deserves to have his house overrun by ants, it's him

And monkeys might fly out of my butt...



US Gold ▪ £37.99 ▪ 1 meg ▪ Mouse ▪ Out now

"Eagerly awaited". Now there's a phrase that fits this game perfectly. Since the original Monkey Island revolutionised the world of graphic adventures a few years ago, the whole world, and probably some of our neighbouring planets as well, has been holding out for the continuing adventures of Guybrush Threepwood and his pirate pals.

And it's here. Right now. In fact, there's a copy waiting for you at your local software shop. So go and buy it. Go on.

Hrrumph. I suppose you'll want me to tell you a bit more about the game than that. I might as well, I'd probably get sacked otherwise. All righty then, here comes the story so far...

Way back in the Secret of Monkey Island, we met a wannabe pirate by the unlikely name of Guybrush Threepwood. Under our careful guidance, he became a fully-fledged pirate and defeated the evil ghost pirate, LeChuck.

Fast forward a few years and we rejoin Guybrush as he sets off to find the legendary treasure of Big Whoop, and deal with the newly resurrected zombie LeChuck.



We also bump into some other old friends along with Guybrush and LeChuck. Stan the used ship salesman is now a used coffin salesman.

Governor Elaine Marley is back as Guybrush's reluctant leading lady. The spooky VooDoo lady has set up her own VooDoo mail order service, while Herman Toothrot is still a hermit. And, yes, there are monkeys in it.

While we were away things have changed for our hero. Guybrush has grown himself a natty goatee beard and become a respected and admired hero. At least, that's what he thinks.

Once again, you must wield mouse to direct Guybrush through an even bigger and better adventure than before. A heady brew of voodoo, zombies, pirates and caustic humour awaits, so let's take a look.

And it is indeed bigger and better than before. The feel and look of the game is a lot nicer this time, thanks to what looks like graphics ported across from the PC.

It even sounds better thanks to the iMuse sound system. This adapts the music as you progress, so the music flows naturally from upbeat reggae to spooky graveyard music with nary a hiccup. It also gets full marks for incorporating the refrain from Wave of Mutilation by the Pixies into the music for the town of Tickwood.

The humour's back as well, and it's rib tickling stuff. Oh yes indeed missus. All the way through it manages to spoof everything from Star Wars to the original Secret of Monkey Island, with little digs at people in general all the way through.

If anything MI2 is even dafter than its predecessor, and its got the most ridiculous ending ever.

The control system remains unchanged, with the same commands only a mouse click away. The only thing it does lack is a drop command so Guybrush's pockets soon stretch to Tardis-like proportions.

There's no limit to how much you can carry, but the more stuff you have, the longer it takes to look through the inventory. However, it does eliminate the problem of choosing which items to take and which to leave.

It's also a very user–friendly game. If you're a beginner then you can opt for a trainer version of the game with some of the trickier problems removed, and even the full game helps you along with a friendly shove.

That's not to say it's easy. Oh no. Some of the problems are total killers. It's just that the game avoids situations that could leave you

VISION
GGGGG
Smooth animation, detailed graphics and sprite scaling.

AUDIO
GGGGG
Plenty of tunes and FX where suitable. Plus! Plus! The Pixies!

PLAYABILITY
GGGGG
As funny and enjoyable as before. But more of it.

ADDICTION
GGGGG
More sleepless nights. Dubious appeal once it's finished.

95%



stranded. There's no sudden death, and if you make a mess of a problem, maybe by forgetting to get a certain object, then the game will let you get it rather than forcing you on without it. This means that you are free to experiment with different responses and ideas without fear of being penalised for it.

Other points worth highlighting are that despite the incredibly detailed graphics and animation, the game still skips along at a fair old pace. Take note, Sierra. Even playing from the startling 11 floppies, it's smooth and swapping is kept to minimum. Ber–limey, eh?

Well, this is all getting a bit sycophantic so I'll go into "cynical old man mode" and pick up on some downers. Hmm. Well, my biggest problem is that the whole thing is fairly unsurprising.

There's been no great shake–ups on the style front. If I was feeling very brutal I could be tempted to say that it's basically a remake of the original with cosmetic changes and different puzzles. But then, Evil Dead 2 was a remake of The Evil Dead and it was tons better.

The other problem with games of this ilk is that once you've finished it, you won't be back. It may take you a long time to get there, but once you've done it the appeal vanishes. Yeah, it's nitpicking but you should be warned.

Apart from that though, this is horribly close to being a perfect game. It's certainly the best adventure I've seen for ages, and it sets the standard for future graphic adventures in the same way the original Monkey Island did.

Fans of the genre should seek this one out without delay. In fact, they probably already have. And good for them. You know it makes sense.

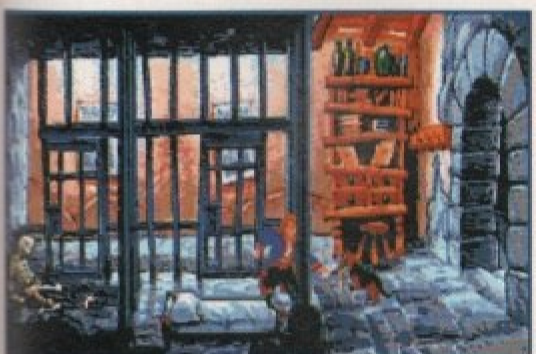
Daniel



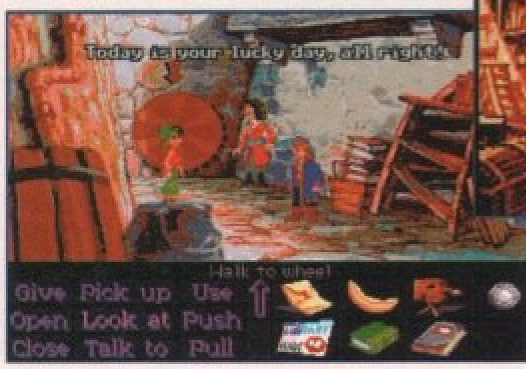
Nice to see Guybrush is still as popular as ever



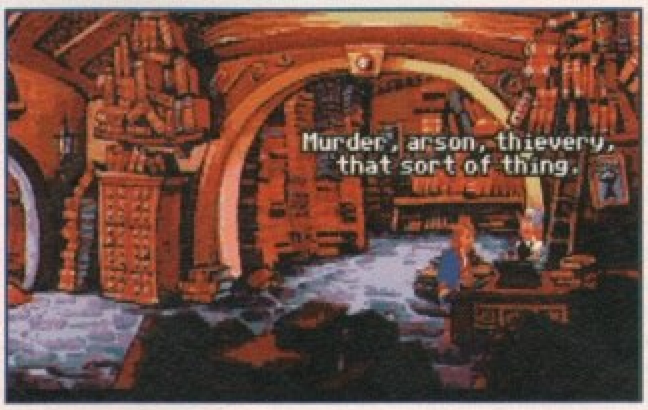
Eek! The Voodoo lady's back again! Lock up your wildfowl!



The savage Caribbean Pit Bull strikes again



It's Nicky Campbell and the Wheel of Fortune



Guybrush lets us know what's expected of us



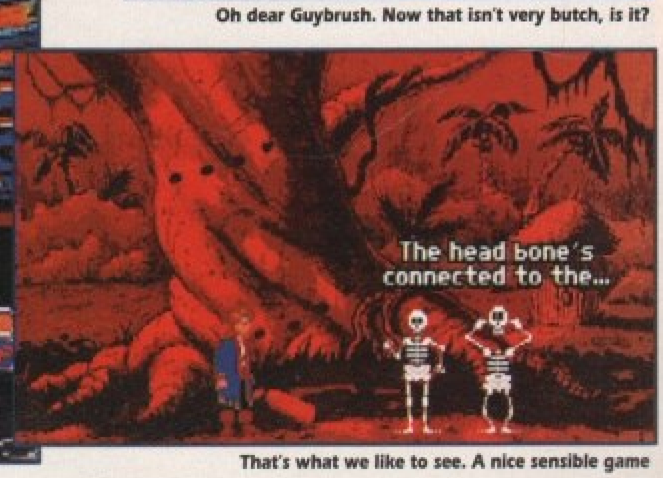
Take it away Loyd Grossman...



Oh dear Guybrush. Now that isn't very butch, is it?



An 18th century laundry. What would Dot Cotton say?



That's what we like to see. A nice sensible game

Race with the rich in...

JAGUAR XJ220

CORE • £25.99 • 1 meg • Joystick • Out now

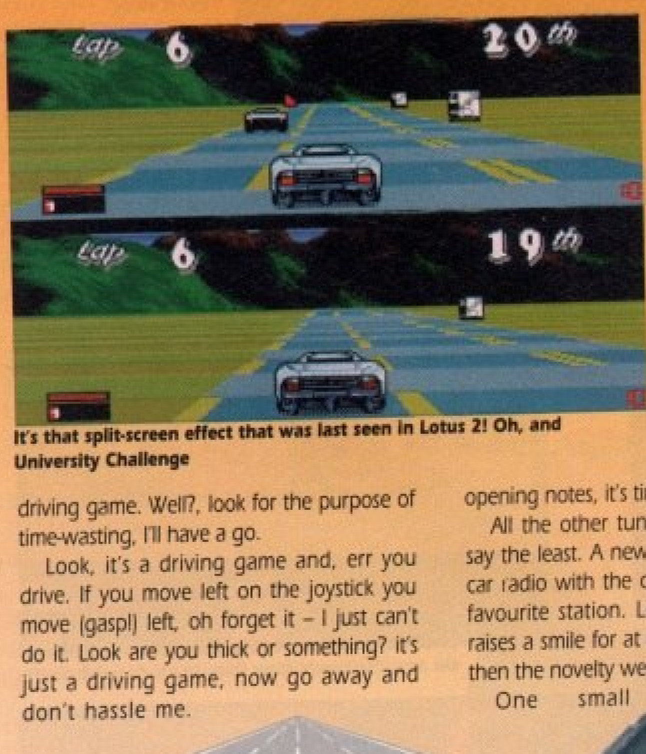


It's that in-car stereo that was last seen in Lotus 2

Question – what's the difference between Jaguar XJ220 and Lotus Turbo Challenge 2? Answer – not a lot.

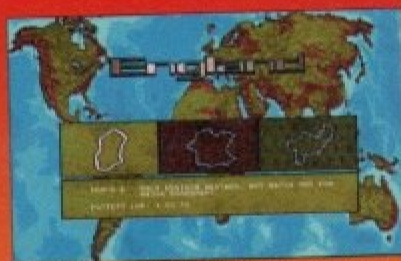
To say Jaguar XJ220 has been warmly received by the computer press is a bit of an understatement. In fact some computer mags have gone so far as to give the game a four-page review and percentages bordering on the ridiculous.

I mean a four page review on a driving game? It's just not physically possible, believe you me I'm having trouble filling one page. What on earth do you say about a driving game. Well?, look for the purpose of time-wasting, I'll have a go.



It's that split-screen effect that was last seen in Lotus 2! Oh, and University Challenge

Look, it's a driving game and, err you drive. If you move left on the joystick you move (gasp!) left, oh forget it – I just can't do it. Look are you thick or something? it's just a driving game, now go away and don't hassle me.



Mild British weather? Don't make me laugh...

Oops sorry my temper took over, I'm sorry, it won't happen again. Right what can I say now? Ummm.

Jaguar is good. In fact it's very good, but it's far too similar to Lotus 2. The graphics and sound are better than Lotus 2 which is fairly obvious seeing as though Lotus 2 was released a year ago – you know technology advancements and the like.

There is major difference between the two games and that is that Jaguar XJ220 has a track editor, thus allowing you to construct tracks from scratch or modify any of the 36 available.

This is a fairly neat idea, but in the end it's just another gimmick. Talking of gimmicks, remember the in-car stereo in Lotus? Well it's back in Jaguar and for one reason only it's tons better.

That one reason is Thrash Pig – probably the noisiest, rocking tune since, well since ever really. As soon as you hear those wonderful opening notes, it's time for a mosh frenzy.

All the other tunes are a bit bobbins to say the least. A new nice little feature is the car radio with the option to tune into your favourite station. Let's put it this way – it raises a smile for at least three seconds, and then the novelty wears off.

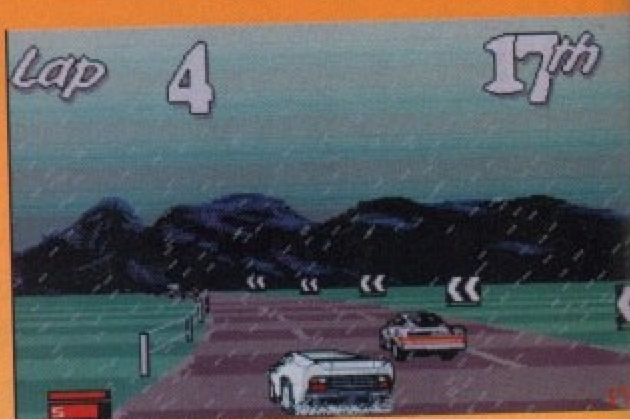
One small teeny weeny problem with Jaguar XJ220 is the Jaguar XJ220. It has a maximum speed of 213 mph. This little baby can do 0–100 mph in eight seconds. Now because of all this speed you'd think that the game was pretty fast... wrong!



Where's all the comedy champagne fights?

In Jaguar XJ220 you just don't get any feeling of speed. For instance I was taking sharp corners at 200 mph and it just felt as though I was doing 40 mph.

The handling on the Jag is so good that the game is really easy to play. You race against Porsches and Ferraris and you fly past them as if they weren't there.



Look at all this bright warm sunshine...not!

You get to race in 12 different countries and each country has three tracks in it. The first track is a breeze and you are guaranteed to come first. The second is slightly harder with more difficult corners and you probably come first or second, but – and this is a big, big but – the third track is really hard. It normally puts you in some freak weather conditions like snow, fog, night etc and chances are you'll find it difficult to get into the top five.

Overall Jaguar is good, but not that good. It has almost the same features as Lotus 2, like the pits and the in-car stereo, etc. The graphics are excellent and sound is very good, especially Thrash Pig.

The problem is not that it's not as playable or addictive as Lotus. But Jaguar has far more tracks and it is a lot harder to complete. If you like car games then you'll love Jaguar XJ220, but don't waste your money if you've already got Lotus 2.

Jonathan



VISION
GGGGG
Lovely, well-presented graphics.

AUDIO
GGGGG
Hey, this mark is dedicated to Thrash Pig only!

PLAYABILITY
GGG
Because the car is so good it takes a lot of the fun away.

ADDICTION
GGG
Fairly addictive, but after a while it gets a bit uninteresting.

83%

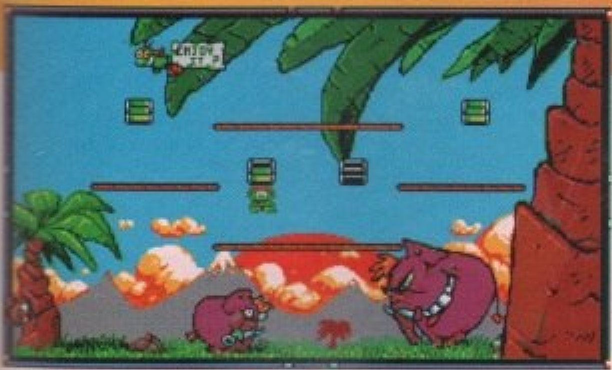
Cool as croc? It's...



THE COOL CROC TWINS



EMPIRE ▪ £25.99 ▪ ½ meg ▪ Joystick ▪ Out now



This is where Punk and Funk's adventure begins...



Remember, it's always much better with a partner than on your own

Whoop whoop, cutesy game alert, warning warning! The Cool Croc Twins are here. Punk Croc and Funk Croc are twins and damn cool twins at that, hence the wild and wacky title.

The only notable difference between Punk and Funk is that one of the green-skinned dudes wears a pair of shades while the other wears a baseball cap back to front.

Now as it happens, as it happens boys and girls, Daisy Crocette is madly in love with them both. Why on earth doesn't she just have a three-in-a-bed kinky... (that's quite enough, Biff – Ed).

Daisy being a dopey croc bimbo decides to forsake her love for the twins and runs off to a Crockery. Why she would want to leave those boys and join a load of cups and plates, I don't know. Oh all right, it's not a load of plates, it's sort of a convent for crocs.

Now if your girlfriend-to-be decided to bugger off and become a nun, you wouldn't be the happiest little croc in the world. So it's time for a fight back. Punk and Funk must battle through 60 screens to win back the lovely Daisy.

The Cool Croc Twins is a straightforward platform game, but it's very difficult to explain what it actually looks like, so if you care to gander at this page you will see what can only be described as screenshots.

The idea is simple – all you have to do is guide either Punk or Funk around the screen. By pressing Fire on the joystick you must make them jump into some little blocks which are liberally dotted around.

A light will illuminate each time you hit a block. You have to hit each block three times, so that the three lights, err light up. Light up all the blocks and you will progress to the next level. Easy, ain't it?

Now all games with good guys in them have to have bad guys too – it's the law of computer games. The battle of good against evil is what computer games are all about.

There are loads of mischievous beasties trying to stop you from reaching the croc goddess Daisy. They do this by turning the lights on the blocks off again. If one of these monsters hits you, you will lose one of your precious three lives.

Don't worry though – help is at hand. If you land on top of, or hit, a beastie in mid-air it will disappear. You will receive bonuses when you kill one of these beasties, but don't hang around because another will be around to fill its place.

The poster/manual included with the game – to be honest – tells you precious little. It's got Punk and Funk in conversation telling you what to do, but unfortunately because it's a supposedly cool game it's got supposedly cool "speak" in it.

Phrases like "tyell it like it is, bro" litter the instructions. Besides, it's probably better not to read the instructions, and to work it out for yourself instead.

Overall, The Cool Croc Twins is not bad. The graphics are fairly good, but nothing really special. Soundwise there are a few funksome tunes to be heard and a few effects.

It is very playable, being more fun in two-player mode than in one. I liked Cool Croc Twins, but there's something about it that doesn't make it a hit game.

I can't really put my finger on what it is, but I think it's something to do with the actual format. After a while it all gets a bit too similar. Never mind, not every game gets or deserves a Gamer Gold and guess what? This is one of those games.

Jonathan

VISION
Nice small but detailed cutesy graphics.

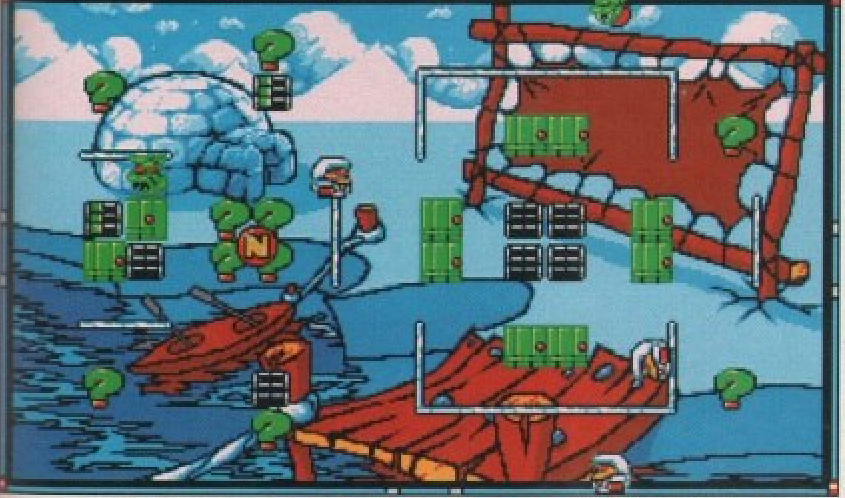
AUDIO
Funky tunes, but nothing special.

PLAYABILITY
A much better game in two-player mode.

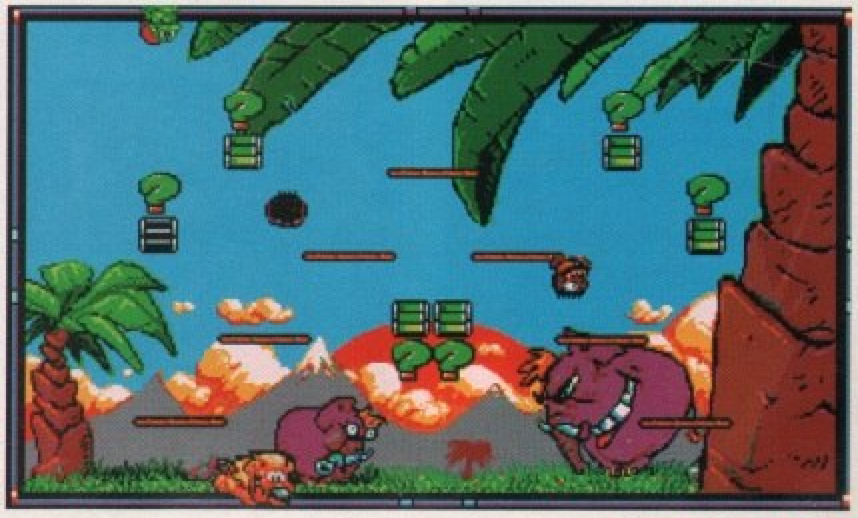
ADDICTION
Attractive at first, but then gets fairly boring.

75%

Now I don't know about you, but I could do with a pair of crocodile skin shoes... hmmm



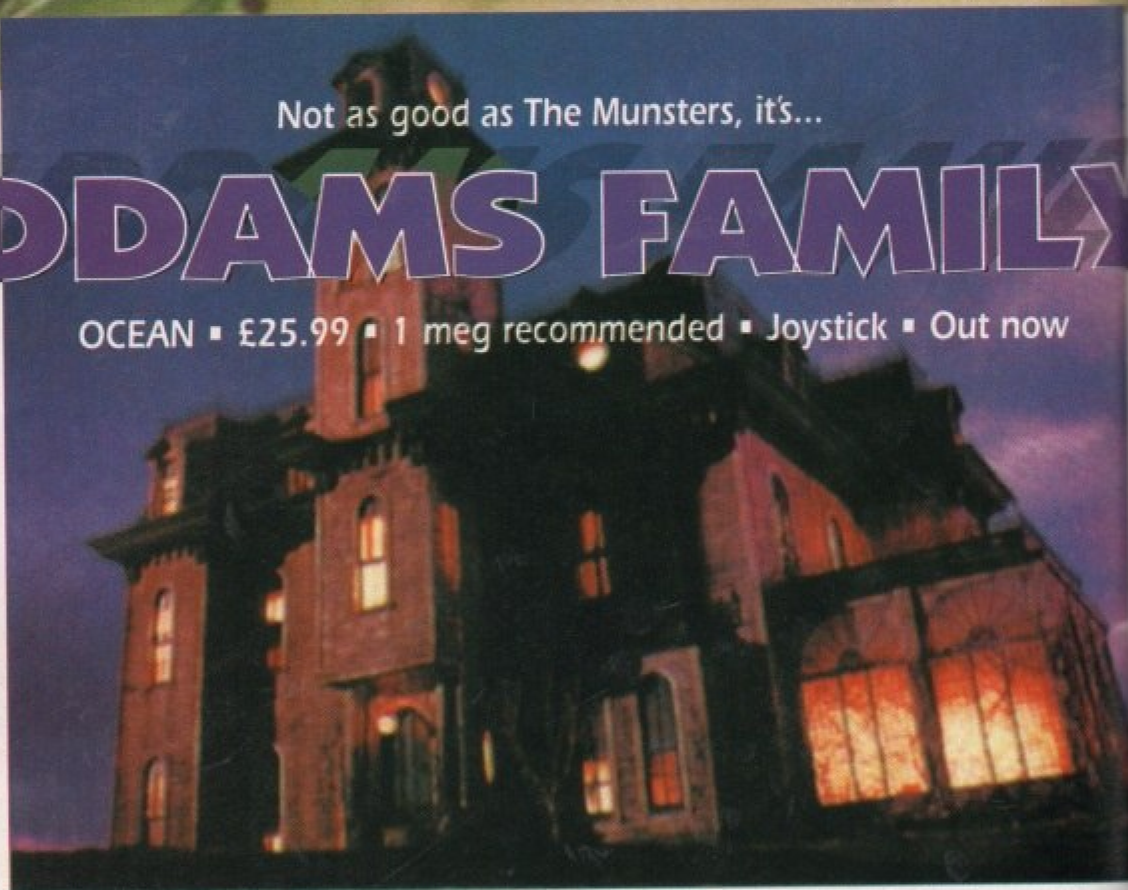
Platform japes with the world's coolest crocodile twins



Not as good as The Munsters, it's...

THE ADDAMS FAMILY

OCEAN • £25.99 • 1 meg recommended • Joystick • Out now





Yeehaa it's Gomez in his Fezcopter



One of those secret rooms. Where is it? Oh I'm not telling, it's a secret...

We all know Ocean were famous for signing big licence films and then turning them into boring and downright awful platform games. Take Robocops 1 and 2, Darkman and Total Recall for example.

Lately perhaps, Ocean have been listening to Joe Public a bit because some of their recent releases such as Robocop 3, Parasol Stars and Epic have been brilliant.

Ocean's latest game is The Addams Family, gulp! I clasped my hands and prayed to God that it wouldn't be Darkman with different graphics. I think in some small way my calls were answered.

It's a platform game, but it's no ordinary platform game. Nay missus, The Addams Family is a platform game of epic proportions.

The Family are a bit of weird bunch to say the least. Let me introduce you to them. First up are Gomez – the main character in the game – and Morticia, while Pugsley and Wednesday are the mischievous kids who are always trying to kill each other.

Lurch is the butler, Granny is mad, as all good grannies are, and Uncle Fester is the family weirdo – you should see what he can do with a light bulb! But without a shadow of a doubt the star of The Addams Family is The Thing.

The Thing is a hand and in the original TV series he just stayed inside his box, but now thanks to magic of film special effects he can come out and do all sorts of weird and wonderful things.

If you decide to buy the game you'll, no doubt, be rushing out to rent the video – well you'll be pressured into renting the video because it's splashed all over the box and the game's title screens.

Hey wait a minute, I think I'll run up to my local shopping centre and visit the video shop. Hmm what shall I rent? At £2.50 a time I'd better decide carefully, aha The Addams Family this looks quite good, I'll rent this.

All that talk about The Addams Family video plastered all over the box has actually influenced my decision to rent the film. Blimey, there must be a marketing man somewhere looking very pleased with himself. Right enough of this insane warbling, I suppose all you lot want to know more about the game. Well I'm the reviewer and I can do anything I want, but because I'm in a kind and forgiving mood I will tell you more...

You play the part of Gomez and it's his job to venture through level upon level trying to get his precious family back who have disappeared somewhere in the house.

Right, The Addams Family is huge, giant, massive. OK let's slow down and put this size business into perspective.

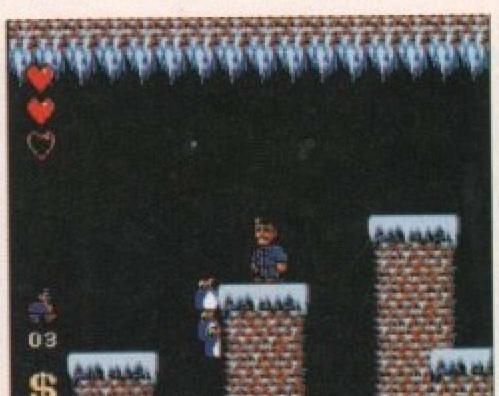
Any other platform game on the Amiga is the size of Southport, The Addams Family is the size of Russia. If you're a dedicated platform game fan then The Addams Family is a game you can't afford to miss.

Now whenever a platform game comes out that is this good, people turn to comparisons. For instance, if I even uttered the





Tweet Tweet on this...



Eeek, Penguin Mosh Frenzy!!!



Goodness Gracious Great Balls of Fire!



I bet Percy Thrower never had this problem!



Looks like Gomez is heading for the chop...



Play it again, Sam!

words "short, fat, blue and red uniformed, Italian plumber" then you'll know instantly who I'm talking about. It has to be said that The Addams Family is very similar to the Mario games, which if you think about is no bad thing at all.



I wouldn't recommend it to the platform beginner because it's very tricky and you'll just find yourself throwing the joystick around the room in frustration. For the more experienced gamers it's ideal because there is no way it's going to be completed in a couple of days. The Addams Family is one of the most enjoyable platform romps I have, err romped on in a long time. There are hundreds of enemies and obstacles for you to avoid.

It's got loads of platform clichés in it. Secret rooms are to be found everywhere, hundreds of coins to be collected, invincibility pills to be plundered and a handy little item that can be found to help Gomez find his family is his fez

This little fez is no ordinary fez – it flies, thus enabling Gomez to reach those parts of the game that other non-fez wearers can't reach.

Overall The Addams Family is probably one of the greatest little platform games of all time on the Amiga. The graphics are excellent and give it a console feel.

The backgrounds used to be parallax scrolling, but due to speed loss they have been changed to a simple black, which isn't as bad as it sounds because the sprites are easier to see.

Sound wise you get a startling reproduction of the programme's theme tune. The effects aren't bad, they just serve their purpose. Plenty of 'em though. On the playability front, you can't go far wrong. Everything moves as it should. A dead easy control system makes it a doddle to play.

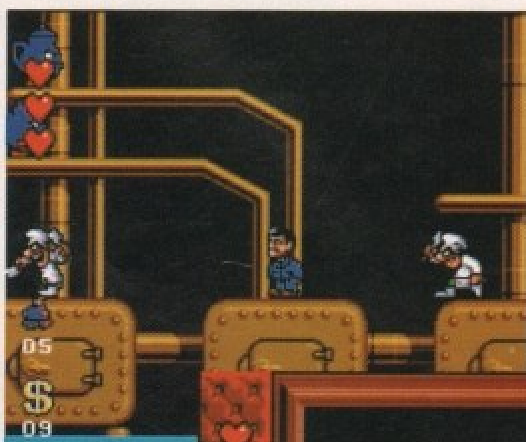
You'll keep on coming back to it, simply because the game's so huge. The fact that you can input codes to return where you left off does help matters.

I was addicted to it within minutes and it's not often that that happens. The Addams Family that be creepy and spooky and all the rest of it, but if I were you I'd get down to the shops and buy a copy before there are none left. Hurry up.

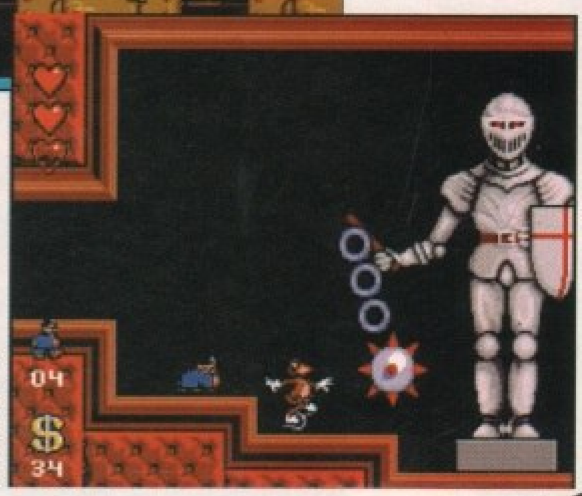
Jonathan







Hmm, what's cooking? Looks like Gomez to me



Gomez ducks from a scalping from ye olde knight type fella

VISION

Lovely detailed cute cartoony graphics.

AUDIO

Good rendition of the Family theme tune.

PLAYABILITY

I'd play it until I die of old age, it's that playable.

ADDICTION

It's addiction at the government health warning level.

91%

Time for a platform romparama, it's...

JIM POWER in Mutant Planet

GAMER GOLD

LORICIEL ▪ £25.99 ▪ ½ meg ▪ Joystick ▪ Out now

If you are looking for a challenging platform game with astounding graphics and downright sexy sound, then Jim Power could be just what you're after.

You are Jim Power, the chief of the Special Warfare Unit for the Security of President Halley (S.W.U.S.P.H.). OK it's a crap abbreviation, but don't you worry because Jim Power just so happens to be the best member of the S.W.U.S.P.H.

The story goes that President Halley's beautiful daughter Samantha has been kidnapped (wow that's original!). The mad, bad and very scary indeed Vulkhor is responsible for this terrible deed, but then again Vulkhor is the infamous devil from the Mutant Planet and kidnapping is the sort of thing that devils are meant to do.

The Mutant Planet is not the sort of place that Judith Chalmers'll recommend you go to. It's full of, err, mutants and a few more mutants. No-one has ever dared venture to the Mutant Planet – that is until now.

Now why on earth would Vulkhor want to kidnap the President's daughter? Well maybe it's because the President is the only person in the whole wide world who knows where the ultimate arm is. That's arm as in gun type thing, not as in the thing that hangs from your shoulders.

So Vulkhor does the decent thing and decides to blackmail the President, or else his daughter gets it.

As you might have guessed, Jim Power is a platform game – a five level platform game to be precise. Jim roams through dense forest, strange cities and gloomy caves just to save the President's daughter. What a daring, brave chap Jim is.

Now this won't be an easy task by any means. Using his blasters, Jim has to, err blast through the many beasties that inhabit the Mutant Planet.

Fearful creatures such as zombies, vultures, dragons, spiders, carnivorous plants and other strange creatures are all after your blood. Not only does Jim have to contend with beasties, but he has to survive all the traps such as acid drops, stakes, flames and stalactites.

Well I think Jim could do with a little help, so just to help him there are modules. Inside these modules are things such as shields to shield you, clocks that give you a bit of extra time and the 1UP bonus which, surprisingly enough, gives you another life.

The most important thing to collect in Jim Power are keys. These handy little items open doors and secret passages, but if you forget a key while you are on your way you are in big trouble because you have to go back for the little blighter.

Now I said Jim Power was a platform game, but I lied. There are in fact three levels of platform prancing and two levels of fast shoot-'em-up action.

I love Jim Power – that's the game, not the bloke. I bet you were getting a bit hot under the collar there for a minute.

The graphics are amazing. There are 200 colours on-screen at once (oooohl), three playfields in 50Hz (gussspl) and an ergonomy with unrivalled flexibility (eh?). Well it means nowt to me, but it sure does look good. Soundwise – well the bloke who created the music for Turrican is back, so if you loved the music from Turrican you're sure to love the music in Jim Power.

It's as playable as Kim Basinger's bits (calm down, Biff – Ed) and more addictive than something that's quite addictive indeed.

But it is very hard indeed, and is definitely not for the beginner – a couple of years of platform pantalooning experience is definitely needed. Good graphics, sexy sound and playable playability, what more do you want... blood? Jim Power is way cool.

Jonathan



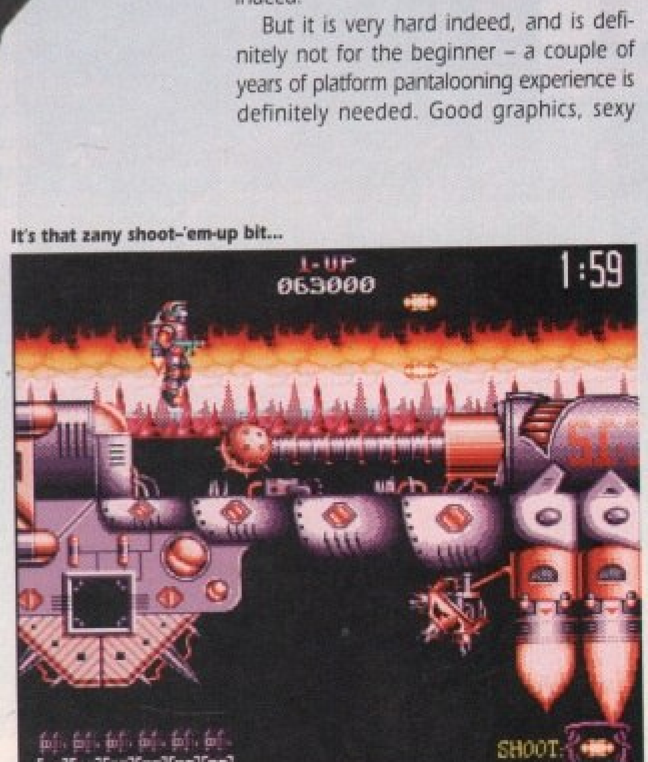
Jim does his amazing levitation trick – eat your heart out David Copperfield



Extreme close up! Whhhaaaaaagggghhhhhhh...



It's that zany shoot-'em-up bit...



VISION

Blimey, have you ever seen graphics better than these?

AUDIO

Blimey, have you ever heard music and sound FX better than this?

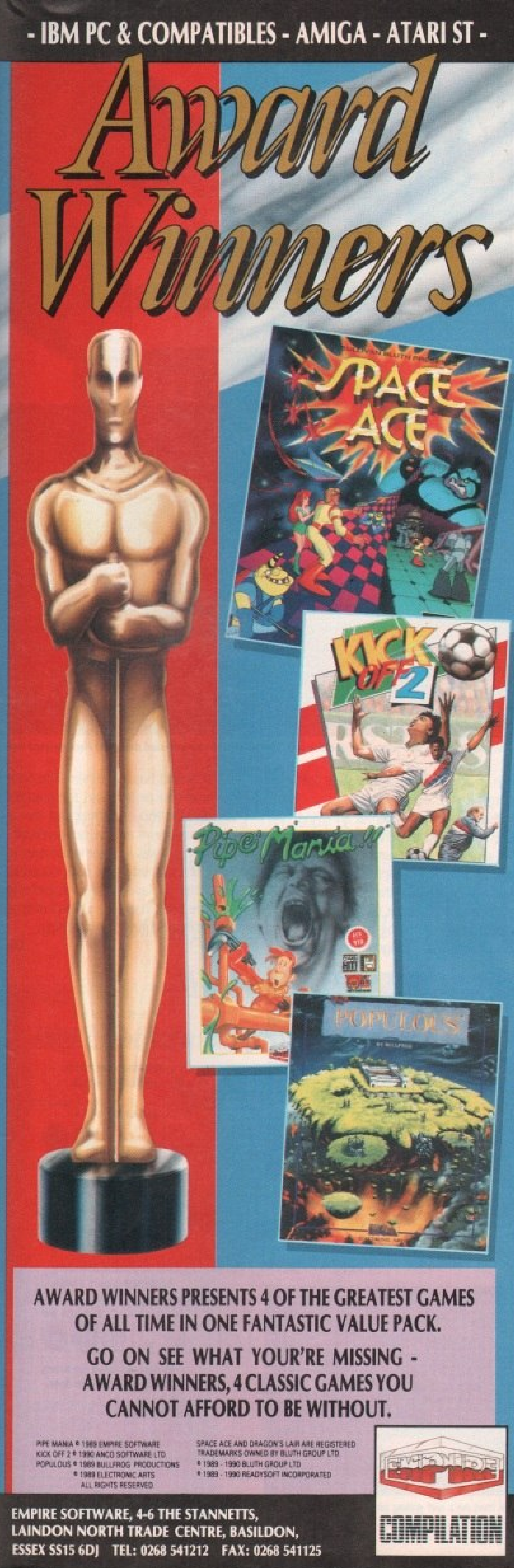
PLAYABILITY

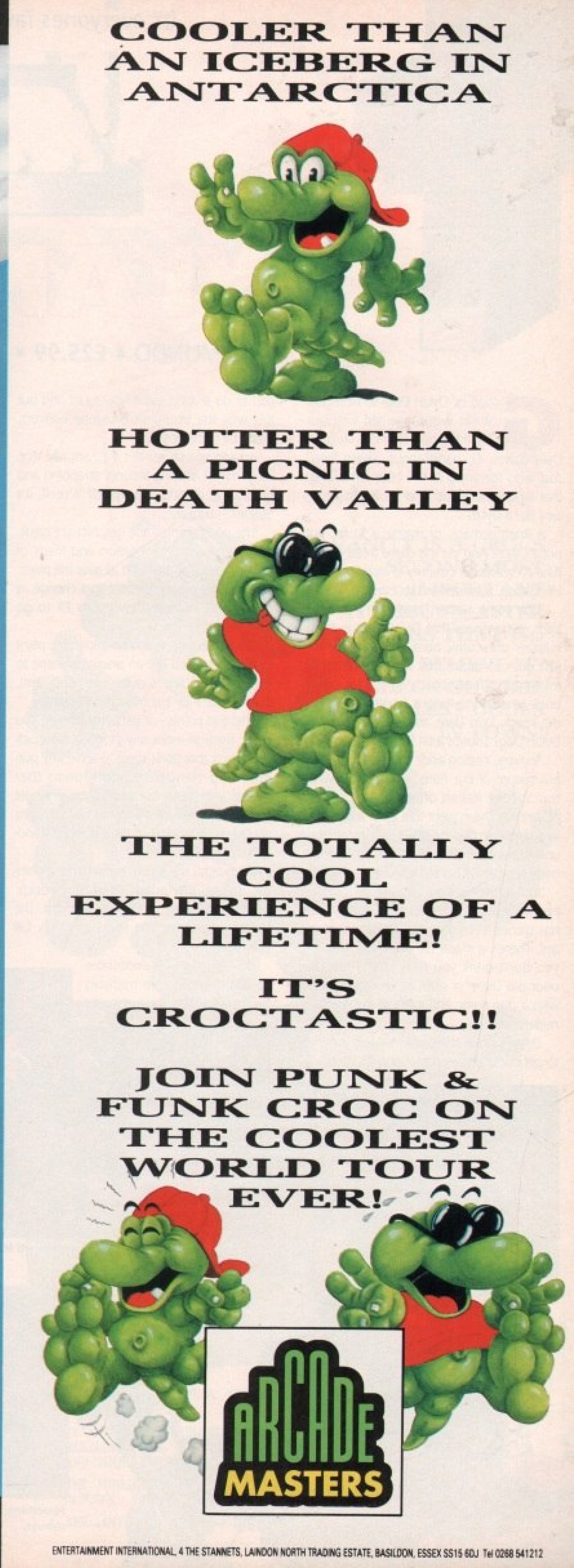
Excellent, but not for the beginner.

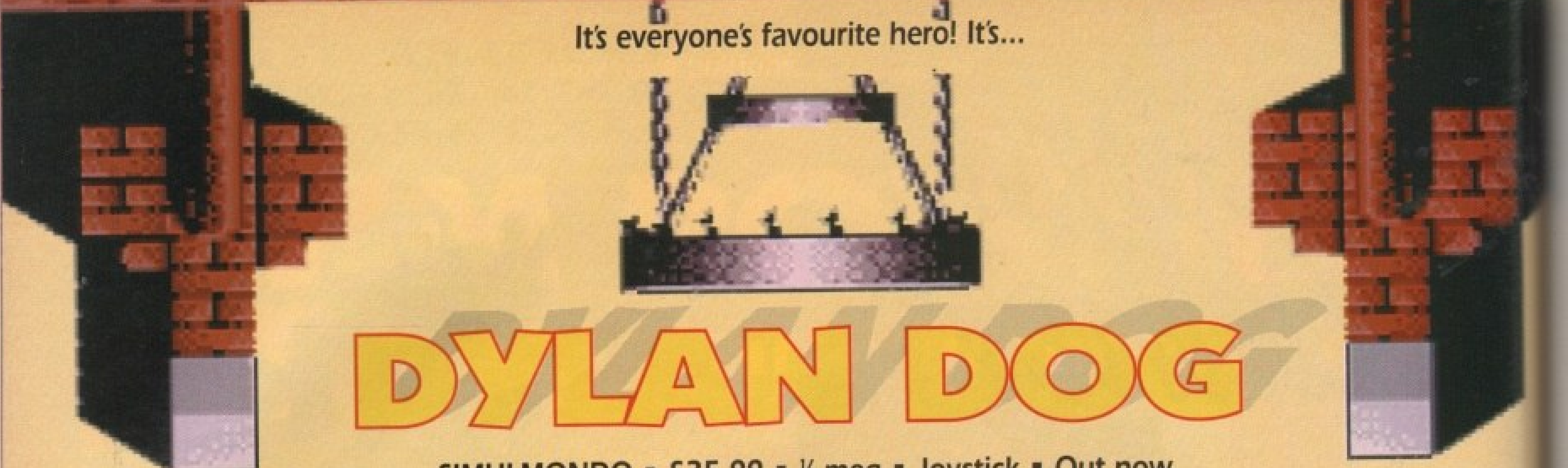
ADDICTION

Wow, well I'm addicted, how about you?

90%


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It's everyone's favourite hero! It's...

DYLAN DOG

SIMULMONDO • £25.99 • ½ meg • Joystick • Out now

Good ol' Dylan Dog! What a guy! What would we do without Dylan Dog, eh? Ol' Doggy. Dylly Babes. Er, hang about...Dylan Dog? Just who the smeg is he? He's not a dog, that much is obvious, and he doesn't even look like a Dylan.

A Brian perhaps, or maybe a Stuart, but not a Dylan. And yet this game treats him as if he's a computer celebrity to rival Sonic The Hedgehog. Stranger and stranger...

After some Nancy Drew-type investigations, it transpires that Dylan Dog is Italy's number one comic book character, which just goes to prove that when it comes to thinking up really butch names for comic book heroes, the Italians haven't quite got the knack. Dan Dare, that's a butch name. Dylan Dog? Sounds a bit Disney, doesn't it?

Anyway, casting aside the rather mysterious nature of our hero, let's see just what this spooky Italian offering is all about. Apparently Dylan went to a bit of a knees-up in some mansion or other last night, but unlike everyone else he didn't have a tipple or three of finest Bavarian booze.

Just as well really, because for reasons best known to the brewery, the happy juice has turned everyone into homicidal maniacs. There's a moral for you there kids – if you don't drink you miss all the fun. So, poor old Dylan is stuck in an old mansion with a crap name and loads of axe-wielding nutters.

Dylan's razor sharp instinct tells him to get out of there pronto, and it's up to you to do it. Oh, and if you could find out just why the beer sent everyone bonkers, that'd be quite nice too.

Arcade adventure? Yes it is, actually. The usual mix of running around, scrapping and picking up objects. Any good? Weeell, it's bearable I suppose.

The good points – the graphics are great, with nice realistic animation and loads of tomato ketchup splattered all over the place. You also get plenty of tunes that change as you go on, but very few meaty FX to go with the gore.

Whenever you reach an important point in the game, you get an animated scene to illustrate it, which is quite nice. And, erm, that's about it for the good points actually.

The bad points – it gets very boring. You never seem to make any progress, you pick up objects that don't seem to serve any purpose and wander through rooms that appear interesting but aren't. You only get six bullets for the whole game, which means you have to indulge in far too much hand-to-hand combat.

And, blow me down, hand-to-hand combat is crap. You punch, then they punch. Worlds are born, stars go supernova, the universe revolves, and eventually they fall over dead.

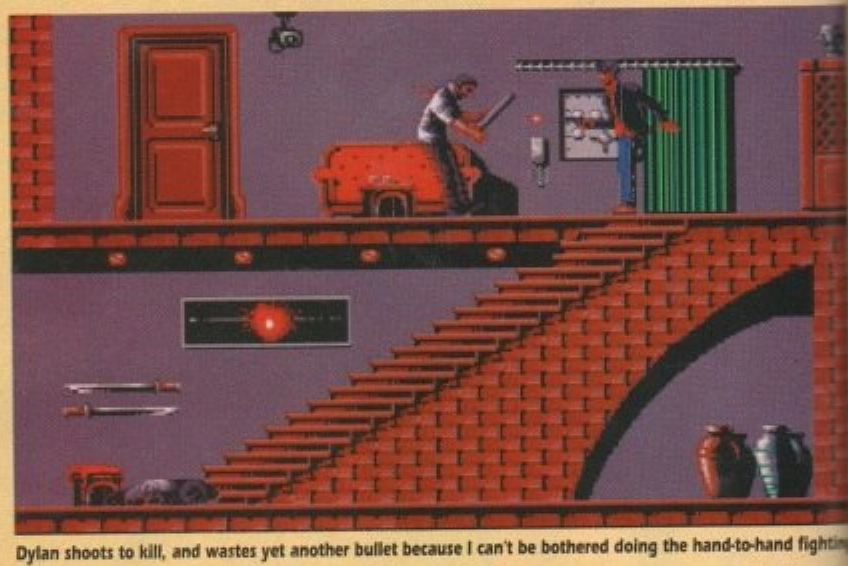
It's also nigh-on impossible to die. I spent five minutes being attacked by a maniac with a power drill, and barely lost any energy. Challenging it is not.

Plus, the control system is annoying. You have to push up to go through a door, but that also makes you jump. Be prepared to spend a lot of time jumping in front of doors before going through them.

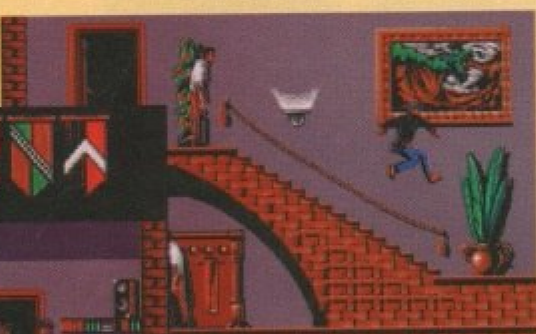
It's always a shame to see a potentially good game spoiled by some thoughtless and generally lazy programming, and that's exactly what's happened here. The presentation is almost perfect, and the graphics are always nice and gruesome, but the actual game itself seems to have buggered off.

Perhaps it was in there when they sent it out, but it got lost in the post, I don't know. But when I played it, it was definitely a fun-free zone. Looks like Dylan's destined to remain in obscurity for a bit longer.

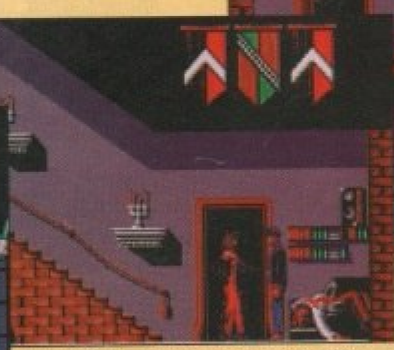
Danie



Dylan shoots to kill, and wastes yet another bullet because I can't be bothered doing the hand-to-hand fighting

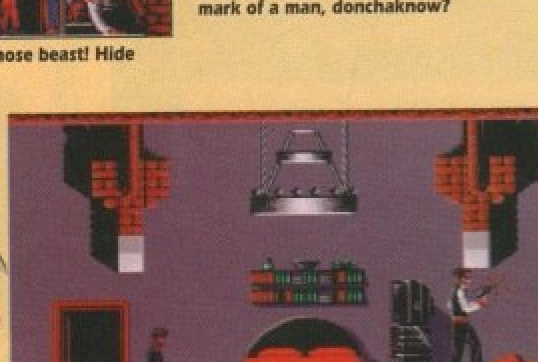


Dylan's butch way of walking downstairs. Fractured ankles are the mark of a man, donchaknow?



Aaaargh! It's a psycho hose beast! Hide yourselves!





Something tells me that he's not going to put up some shelves...

VISION

Top marks just for the exploding eyeball.

AUDIO

Varied, but derivative, tunes, but lacking on the FX front.

PLAYABILITY

It'd be better if something happened once in a while.

ADDICTION

Yeh right, addictive like nailing your lips to the fridge door.

42%



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The Gamer guide to HARLEQUIN

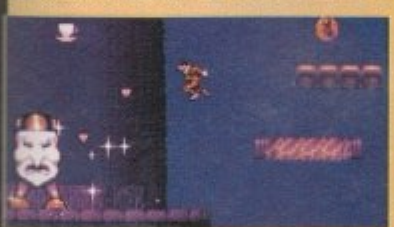
Having trouble getting started playing Harlequin?
Jonathan Maddock guides you to the first piece of the heart

The Clock Tower – Part one



Right, the adventure's about to begin. Your first task is to climb to the first switch which starts the moving platform. Jump on to the platform and while there fire your hearts at the baddies below. Once you've killed them, jump off the platform.

You should be able to see another switch. Throw the switch – it creates a platform further up the tower. Get back to the moving platform and stop it when it gets close. Jump on the moving platform that isn't moving any more and use this to jump to the platform above the switch.



Open the box and grab the brolly – you'll need it later. Now get to the moving platform moving again, jump on it and climb up the tower until you reach the next switch. This switch opens the door at the bottom of the tower.

Once flicked, you can jump off the platform and free fall all the way down to the bottom, remembering to open that brolly just before you hit the floor. Run towards the big arrow and enter the Clockworks.

The Clockworks – Part one



Flick the first switch you see in the Clockworks and slide down the slopes. You'll see another switch at the bottom. You won't be able to reach it, but if you climb the last slope and jump across you will be able to throw the switch.



This starts the clock hands in the Clock Tower. Now climb to the swinging pendulums and swing across to the left-hand side of the Clockworks.

Slide down the big slope, carefully avoiding the drips, and leave at the door marked Exit. This takes you to The Dream Mile.

The Dream Mile



Open the box and collect the thing that turns you into a fish. Be careful not to drop into the water if you haven't collected the fish icon.

You'll come to a pyramid with a temple inside. Climb over it and head towards the next pyramid structure, sliding down the left-hand side. After getting past the tricky jumps and the strong wind, you should be able to flick the switch to open the temple.



Head back towards the temple and go inside. In the top right-hand corner there is a large plug with a switch beside it. Flick it, as this operates the Virtual TV in TV Wonderland. Leave The Dream Mile the way you entered and go back into the Clockworks.



The Clockworks – Part two

Use the moving platforms to reach the big slope before jumping across to the left in the direction of the cogs. Jump on to the cogs and up on to the conveyer belt – watch out for the snake beastie!

Using the conveyor belts, head towards the right until you can go no further. Drop off the last conveyor belt and land on the platform below. Hit the switch above.

Now jump on the platforms to your left collecting energy as you go. At the bottom of the Clockworks, just underneath the pendulums, there's a very narrow passage which was blocked before.

Harley should now head left towards the entrance of the passage. Enter it and crawl towards the right until you reach a small chamber with a switch in it. Flick the switch and collect the hidden bonuses.

Go back the way you came in. Use the pendulums again to head left towards the cogs. Use the conveyor belts and go right. Remember that wall that was blocking your progress? Well it is no longer there, hurrah!

The next bit can be tricky if you don't do it right, so listen carefully. Where the last conveyor belt is, there's a piece of floor at the end. If you hit this you will slow down and won't be able to jump the gap to reach the exit.

So when you come to the last conveyor belt and are ready to jump for the exit, jump before the bit of floor. Now feel mighty proud of yourself, because it's time to move on to the next bit.



cheat mode

The Clock Tower – Part Two

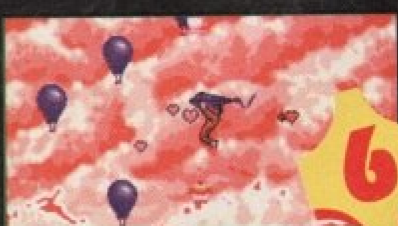
Here we are back at the Clock Tower and you must climb all the way back to the top where you will see the clock face. There are tons and tons of bonuses hidden here.

Jump on to the clock hands and swing round a couple of times. On your way you will see a kite. When you are good and ready, and providing you haven't had a dizzy spell and fallen off your chair from watching Harlequin spinning around the clock face, jump for the kite.

Harley will grab the kite and fly magically towards the next level.

5





6

Come Fly With Me

This is probably the easiest peasiest bit in the whole game, but don't get too cocky because from now on it gets really hard (ooer). On the kite you should be able to collect loads of tokens and bonuses, dodging all the obstacles before reaching the next destination The JigSaw Puzzle.

The Jigsaw Puzzle

Right your first task is to find and flick four switches. They are located in roughly the four corners of the level.

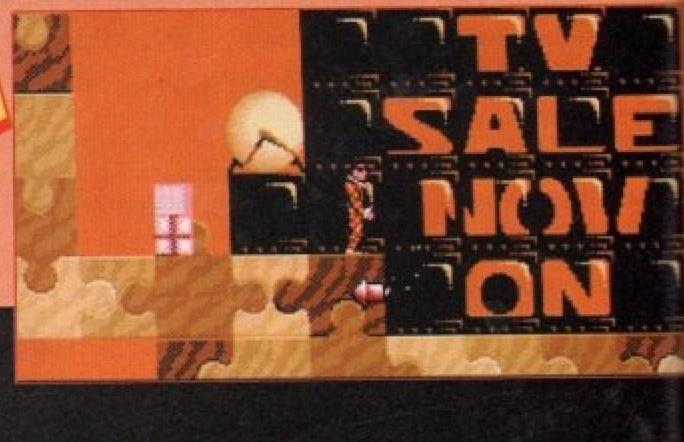
Once all have been switched on, you should be able to find an upward passage which was blocked off before. This is located in roughly the centre of the level.

Use the small platforms to climb upwards and you will find a bank of TVs at the top – all turned off at the moment, but not for long.

Switch them on by running right and finding a hidden switch that isn't very well hidden at all. Head back towards the TVs – they should be displaying TV SALE NOW ON.

This means that you can enter TV Wonderland, which is the level after the next. Go to the exit in the Jigsaw Puzzle, this is on the far right-hand side, about halfway up. Enter the exit and it's time for those Dick Van Dyke impressions because we're off among the chimneys on the rooftops.

7



The Rooftops

8

You will find your first piece of heart near the bottom right of the level. Your first job is to flick the switch directly below you and find another one situated near the start of the telephone wires.

Head right along the telephone wires towards the top right of the screen until you reach a shaft with a moving platform in it. Go down the shaft, flick the switches nearby and the heart will be yours.

OK, so you're now the proud owner of the first piece of heart – only three more pieces to go. Don't forget to flick the switch that's just after the heart piece. This is where I should stop but because I'm a kind chap I'll guide you to the end of the level.

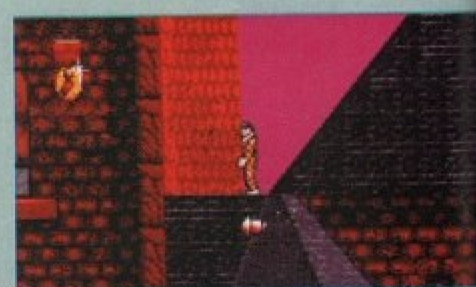
Head back up the shaft. Go left along the telephone wires until you reach the slope that goes down. Go down it and now head right until you come to the end of the wires and land on the roof.

Slide down the roof. You will fall on top of another roof, slide down this one as well and you'll hit another. Slide down it until you see a platform, then jump on the platform.

Now head left until you see a huge window with a familiar arrow jumping up and down. This is the exit to TV Wonderland. I've got you started – now you're on your own.

Remember there isn't a time limit in Harlequin, so take your time!

Also remember to use the handy save option because it's a massive game and takes a good few hours to complete if you start from the beginning. That's it, I'm outta here. Bye!



Ooh, what's inside that Jack in the Box?

Umbrella

This object not only allows Harley to fall down to mother Earth gently, but it's quite handy for those on-the-spot Mary Poppins impressions.



Fireworks

They circle Harlequin, giving him a shield of protection. You can collect up to four rockets but they disappear after a while.



Space Hopper



Harley can use this to reach higher platforms and crush his enemies. In the Jigsaw level, use the hopper at the beginning to jump to the top. You can then access some of the later levels.

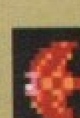
Heart



Gives Harley a mega power boost and changes his weedy pink hearts into dangerous red ones. Harley will now be able to fire further and do away with the baddies quicker. These also disappear after a while.

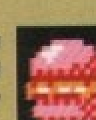
Angel Fish

Hmm, fishy goings on. Harley can use this to change into a fish, but be careful because it's got a timer on it (like most of the objects), and if you go too far underwater you might not make it back.



Burger

Fills your body full of cholesterol, it makes you really fat and you'll have a heart attack and die. Fortunately in Harlequin it restores your energy and you won't die.



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The game begins as you and your party set out to stop the slime producing Ancient sites on Rhylanor. There are 127 detailed worlds to explore with hundreds of cities and millions of square miles.

You can travel from planet to planet aboard commercial starships, or one of your characters may own his own ship. Explore hundreds of locations including cities, data terminals, starships with deck plans, gambling casinos, stores and shops, taverns, trade and commerce outlets, vehicle rental locations, character recruitment centres, crashed and abandoned ships and Ancient sites.









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MEGATRAVELLER 2
QUEST FOR THE ANCIENTS



At each of the Ancient sites, you can discover artifacts and relics that can help the crisis situation on Rhylanor. By helping the situation, you will receive very significant rewards, which will help you to buy passage, or even acquire your own ship so that you can continue your quest.

Throughout your adventure, you will be pursued by agents of the secret organisation.

As well as a main plot, there are dozens of sub-plots on the various worlds, and even aboard starships, to keep you and your party busy.

You will be confronted with interesting adventures filled with mystery, danger and intrigue.

For years, Traveller was the undisputed champion of science fiction role playing. A game of unprecedented magnitude, there was no aspect of spacefiring adventure that Traveller didn't handle, and handle exquisitely. Then along came Megatraveller, a complete redesign of the original Traveller that stands as one of the most remarkable gaming achievements of the last decade.

Superbly designed, Megatraveller was quoted as the pinnacle of science fiction role-playing.



Megatraveller 2: Quest for the Ancients is a unique and innovative role-playing adventure that goes leaps and bounds beyond Megatraveller 1.

The game features the most advanced and comprehensive character generation system ever developed as well as the most intuitive combat system for ground and space conflicts. The overhead perspective is equally unique, showing your entire party from a perspective that realistically represents a large, modern city.

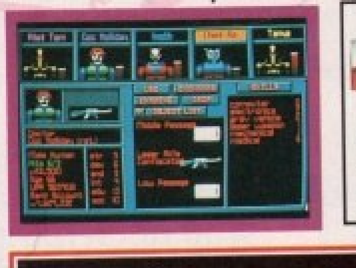
Megatraveller 2 features a much more graphic-intensive presentation than Megatraveller 1. An enhanced trade and commerce system is implemented in Megatraveller 2.

The new economic system is much more realistic and benefits from the substantial increase in worlds.

Megatraveller 2 uses the PAL system: you are the leader of the party, and the others act as your friends. You can give orders, but acting intelligently based on the skills and the characteristics they possess, they may not follow your instructions if they believe that different actions on their parts will ultimately help you in a more effective way.

There are hundreds of NPC's to meet, converse and trade with during your adventure.

Overall, Megatraveller 2: Quest for the Ancients is an all new game with exciting advanced features. The sheer size and scope of the game with over 127 different worlds to explore will keep you playing time and time again. This together with the superb graphics and animated sequences and the revolutionary PAL role-playing system, make for the most exciting adventure yet seen on a Home Computer.



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Looking to help your child's education? Many companies will show all the latest computerised educational courses from early learning to GCSE and beyond.

What about Multi Media? It is now possible to create, reproduce and store sound using your home computer thus enabling you to unleash your own musical creativity and improve your musical performance. Video and visual interfaces are another rapidly developing field where you can edit and change your home videos.

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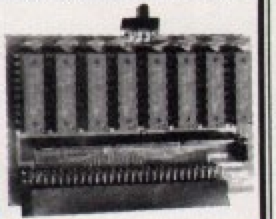
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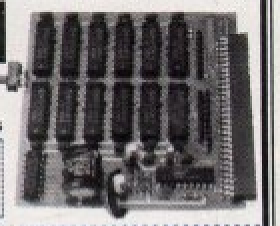
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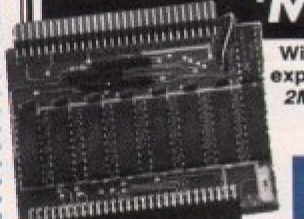
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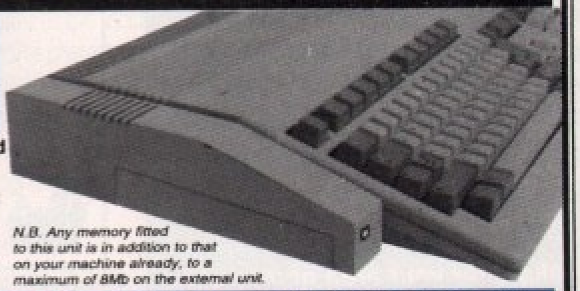
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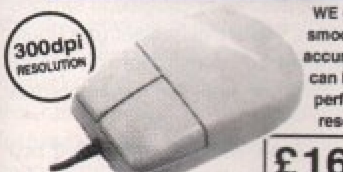


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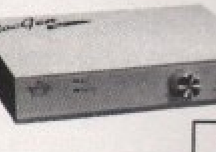


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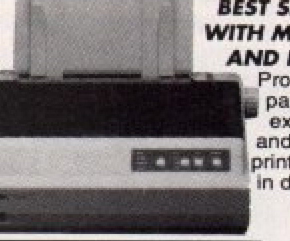
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Compound

Alex Gian looks at Dynamic Array handling in ARexx

In order to be effective for general programming tasks, a language must provide – in addition to flow control and functions – some way of handling ordered arrays of data.

ARexx does not have direct support for arrays, but it does have another very interesting structure, called compound symbols. These allow the user to create arrays, and much more besides!

Those of you who have programmed in languages other than ARexx will know that when you want to use an array of elements, you have to declare its type, and more importantly its size, right at the beginning of your code.

That space then gets reserved, and takes up your memory throughout your program run. If you do not know how big your array finally needs to be, too bad – you must reserve enough memory to make sure that you do not run over your bounds, otherwise you must write dynamic allocation code yourself.

There's no such problem when using ARexx. Since it is typeless, you can mix all types of different data in your compound symbol arrays (numbers, characters and so on) and, as usual, they will all be stored as strings.

But more importantly, you do not have to declare the size of the array at the start. As you add or remove elements, the memory requirements of your structure are taken care of automatically by the system.

This dynamic data handling makes programming quite fun, and many small databases and utility programs have already been produced fairly effortlessly, even by novice programmers.

You may remember that we touched upon compound symbols very briefly, way back in the first article of this series. We will be looking at them in some more detail this month.

Basically a compound symbol is made up of any number of valid ARexx symbols separated by a full stop, eg array.3, man.name and $abc.1.x.y are all valid compound symbols. They can be assigned values, just like normal variables – if they have not been assigned a value, their value is their own name in upper case.

For instance, xyz.9 prints out as XYZ.9 if it has not yet been given another value. In other words, they are identical to normal variables.

In addition, compound symbols have some other interesting properties. The first part of a compound symbol – the part up to the first full stop – is called the stem, and each subsequent part is called a node.

If you think that this makes compound symbols somewhat like trees, you are quite right (see Figure II). Now, an array of any dimensions is a special case of a tree, and can easily be represented as such.

For instance, a three-element array called bcd would have the elements (branches) bcd.1, bcd.2 and bcd.3. Figure I shows a compound symbol representing an array of dimensions 2 x 3.

Here we can see another subtle and interesting difference. With compound symbols, it is not only the last layer of nodes that can have a value, but also every preceding layer.

In Figure I, x.1, x.2 and so on can also have a value, as well as x.1.1 etc. This would obviously be impossible in a Basic–style array.

We have already said that compound symbols let us use arrays without having to initialise their size. They also allow us to initialise all "values" of the array at one fell swoop, even the ones that have not been created yet.

We achieve this by initialising the stem. For instance, the clause bcd. = 55 will set all subsequent compounds of bcd. , eg bcd.1, bcd.2, bcd.fred, bcd.xxx, to "55", until they are explicitly given new values.

Compound symbols can be removed as easily as they can be created. The instruction DROP, which is used to remove the setting of any variable, can just as well be used on compound symbols.

If you DROP stem. then all compounds of the stem are dropped. Of course, the nodes of a com-

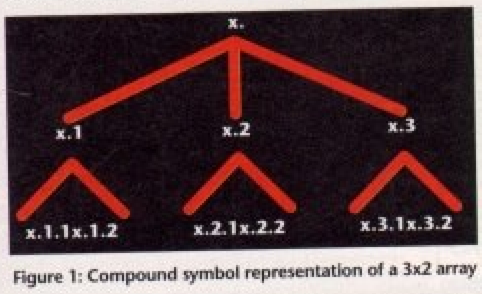


Figure 1: Compound symbol representation of a 3x2 array

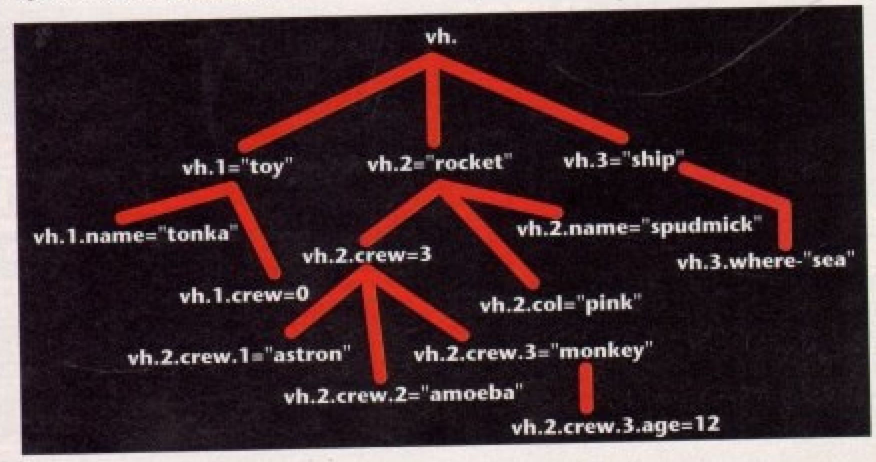


Figure 2: complex structures can be represented by ARexx compound symbols

d symbols

pound symbol are not restricted to being numerals – any valid ARexx symbol is acceptable. In this way we can use nodes as variables which can be placed in counter loops, much the same way as we would in Basic:

```
DO i = 0 TO 100 BY 10
   DO j = 30 TO 4 BY -2
   array.i.j = ourfunction()
   END
  END
```

The power and flexibility of compound symbols does not end here. New nodes can be created or removed at any time, and our "tree" is not confined to any particular shape.

Thus it does not have to follow the fixed form of an n-dimensional array, and can look pretty much however it likes. Complex structures can easily be created and accessed, in a way that would never be possible with arrays. Figure II shows an example of just such a structure.

When ARexx encounters a compound symbol, it checks to see if any of the nodes are variables that can be evaluated. The variables may evaluate (expand) to any ARexx string, including a compound symbol.

The new expanded compound symbol resulting from this operation is the one that is used from here on to refer to the tree-like compound structure. This is a lot simpler than it sounds, and a few examples will illustrate.

Consider the data in Figure II. If we have the following lines of code:

```
/* Expanding compound symbols */
vh.2.crew.3 = "monkey"
wewant = "2.crew.3"
vh.wewant.gender = "fem"
say vh.wewant
```

"vh.wewant" expands to "vh.2.crew.3", and the printed result is "monkey". Similarly, "vh.wewant.gender" expands to "vh.2.crew.3.gender" and a new bit of information is added to our compound symbol, ie the third crew member in the rocket is a female monkey.

You might have noticed that this even allows for the existence of compound symbols that cannot legally be written in ARexx. Look at the following example:

```
/* Compound symbols that can't be written! */
str = "++.-1"
stem.str = "testing..."
va = "++" ;  vb = "-1"
say stem.va.vb
say stem."++"."-1"
say stem.++.-1
```

The last line in the above example is not allowed, since neither "++" nor "-1" are valid ARexx symbol names - it yields an error. The line above it simply gives "STEM.++.-1", so the compound symbol can only be accessed through variables, as is the case in the fifth line. This is despite the fact that the compound symbol's name is "really" stem.++.-1 - A technicality perhaps, and unlikely to bother your programming, but still useful to know.

Next time we will look at the powerful way in which ARexx symbols and their values can interact, and we will also examine a neat requester library.

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Arrays in strings

ARexx offers a unique way of representing simple arrays, which is particularly useful for small one-dimensional arrays that need to be accessed quickly.

This is done by using the strings themselves as the array. Every character string is, by definition, also an array, where the characters are indexed according to their position in the string.

Elements of a known string length can be stored in a larger string and accessed via their position in the string.

Here is a string where five characters are reserved for each element, the rest being padded with *'s. Obviously elements whose length is more than five are not permitted:

```
"**cat**dog*duck**henmouse"
```

However this technique can lead to complications, and is unlikely to be used by an inexperienced programmer, although it could be useful for some applications, such as bitmaps.

However, ARexx also has the ability to consider strings as "sentences", and their individual elements as "words". You can then use the word manipulation functions built in to ARexx to access and add/remove elements.

This makes things very easy. Before we proceed to an example, we will have a brief look at these functions:

WORD(string,n) returns the nth word (element) in the string.
WORDLENGTH(string,n) returns the length of the nth word.
WORDINDEX(string,n) returns the string position of the first character of the nth word.
DELWORD(string,n,[l]) deletes "l" words from the string, starting with the nth word. If "l" is omitted, then all the words after the nth one are also deleted.
WORDS(string) returns the number of words in the string.

In the listing below, Array1 is first assigned four elements. We easily add more elements by the simple joining up techniques that we already know. We delete elements using the delword() function.

There is no built-in function for inserting words into a string, but we can easily do this by making our own function – the procedure addword() does this. It is a simple function that does not do any checks, but it can easily be extended.

In our example below, we insert our new word as the third element, so we use the wordindex() function to find its position in the string.

Note that we must subtract 1 from this position for the correct operation, since ARexx string positions start at 0. This was explained in our third article, on parsing. We must add a blank to our element to ensure that it stands as a separate "word":

```
/* Arrays of words */
Array1 = "cat dog duck hen"
Array1 = Array1 "mouse"
/* Array1 is now equal to
"cat dog duck hen mouse" */
Array1 = delword(Array1,4,1)
/* Array1 is now equal to
"cat dog duck mouse" */
Array1 = addword(Array1,"hen",3)
/* Array1 is now equal to
"cat dog hen duck mouse" */
say word(Array1,4)
exit 0
addword:
PROCEDURE
oldarray = arg(1)
newword = arg(2)
elementno = arg(3)
insertat = wordindex(oldarray,elementno) - 1
newarray = insert(newword||" ",oldarray,insertat)
return newarray
```

An advantage of using this method, rather than compound symbols, is that the order of elements in an array can be rearranged quite easily. These arrays are also easier to access, since you do not have to collect data from individual nodes.

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As easy as DCTV

Paul Austin gets the best from DCTV and examines some essential animator's add-ons

During the last few months, *AC* have had the pleasure of Digital Creations' excellent DCTV as a permanent fixture. During this time we've also had a few frustrated users phone in for advice on how best to employ the system as an animation tool.

It appears that the majority of users are, on occasion, having problems when it comes to animation. The main cause for complaint appears to be a dislike which DPaint displays when playing or displaying DCTV-based anims or stills.

In fact the problem lies neither with DPaint nor DCTV – in the majority of cases the cause of many a sleepless night is often the cabling between the DCTV and monitor/video.

The moral of this story is don't skimp on the connections, get down to the local video specialist and invest in some well shielded RCA leads, alias phono cables – it's money well spent.

While we're on the subject of animation and DCTV, it's perhaps worth exploring a few alternate anim generation programs other than DPaint.

Although DPaint is indeed impressive, it's nevertheless a bit limited on the flexibility front. For the animator working with limited memory, perhaps the worst problem is the inability to assign pause values to individual frames. Many ray tracing packages boast their own anim players which in the majority of cases allow the user to produce a simple accompanying script file, which when complete can control every aspect of the performance.



The logo that launched a thousand anims...

Predefined frames can be looped, others paused for a definable number of seconds, and all to an accuracy level of 1/25th of a second. Imagine employs its Make Movie option to produce controlled anims, while Real 3D uses its DeltaConvert utility.

Of the two, the Real 3D utility is perhaps the more flexible for general animation and can be used on images generated from any source, including DCTV. As a result, a script-controlled DCTV anim is easily achieved by anyone with access to the aforementioned software.

Unfortunately, Real's Delta anims are much larger than standard Anim5/DPaint creations, but you do have the bonus of timing, definable loops, playback speed variation and pause control built into its associated script file.

If you don't have access to DeltaConvert or any other such commercial program, don't panic – there's a multitude of PD anim players which will at the very least provide a basic playback environment for your creations. My personal favourite is View 2.0, a truly wonderful utility that puts many a commercial anim player to shame, including our old friend DPaint...

The program is a creation of Cryogenic software and should be available from most of the larger PD libraries. It will load any IFF, Ham or DCTV display file as either a still or complete anim.

In our case, it's the anim control that really makes it special. Once loaded, any Anim5 sequence can be slowed to a little as one fps or accelerated right up to 25, with the various increments stretching over all ten of the Amiga's function keys.

Any one of the ten speeds can be accessed glitch-free even during playback, and if that's not enough, the anim can be paused completely and advanced a frame at a time thanks to a spacebar–A key combination.

Cueing up

As any budget animator will know, the option to pause an anim at any point while cueing up the VCR is well worth adding to your collection. In short, View 2.0 is almost the perfect anim player and out-guns even the best commercial programs.

The only flaw is its inability to loop sections – something which can only be done with script-driven Delta formats.

Having said that, View 2.0 still has a big advantage in the all important area of storage. Script drive anims are generally much larger than Anim5 productions, so as long as you can live without loops and don't mind manual control, View 2.0 is just about perfect.

If I can ply our illustrious kilt-wearing, caber-tossing editor with a few complimentary bottles of Irn Bru, you might even see the aforesaid software on next month's CoverDisk.

Going backwards

The ever-industrious Alternative Image have just released their latest brainchild, Reverser – a small but essential utility that any serious animator simply shouldn't be without.

The program is basically a renaming utility that takes all the agony out of post-anim production. As I'm sure you're aware, all the major animation programs have their own peculiar methods of naming the files they produce.

As a result, using the products of one package as part of another formerly meant hours of manual labour painstakingly renaming every file to suit the needs of the next program in the line.

With power packages such as Real 3D and Imagine offering frame-by-frame texture changes, the need for automated renaming has become more and more of a problem.

Fortunately, that problem is now solved – all you need do is point Reverser at the directory containing the frames, and the software automatically locates all associated files under a predefined title, waiting patiently as you decide which format you want your anim to become.

As the name suggests, it's also possible to reverse an entire animation as well as rename the files which make it up, Thus spinning logo-type anims are much easier to compile.

Almost all such anims are created backwards for greater accuracy, as a result, the long suffering animator is then forced to waste valuable time renaming the files in order to run the anim in the right direction.

If you're serious about your animation, Reverser is easily the best £10 you'll ever spend. If you'd like a copy, contact Alternative Image on 0533 440041.

Personally I'm already saving up for their next release curiously entitled, Cyber-Neural Networking for Pregnant Women. A software company with a sense of humour - a rare thing indeed.

Just intuition...

...which is about all you have when trying to handle numerical input and output in an Intuition Window. Margaret Stanger gives you some more solid pointers

Input and output is handled so easily in the DOS window with C Library commands. Why does it become so fiendishly difficult when an Intuition Window is open?

The question was inspired by a letter from an Australian reader, W Dring of Lowood, Queensland. This article features the input of numbers, calculations with them, and output of the results in an Intuition Window.

In the DOS window the C Library routine, printf, can be used to display characters, strings and integers. It is very convenient to store a number as an integer, and use the printf routine to convert the number to its equivalent Ascii form and display it.

Floating point numbers needed a little more work – my article in the July issue of described how used routines to give me an Ascii character string corresponding to a floating point number.

There is a similar routine, scanf, to accept formatted input from the keyboard – it also works very well in the DOS window provided that the input buffer size is not exceeded. As soon as an Intuition Window is opened, all these benefits are lost.

There is an Amiga library routine to write text at the graphics cursor position using the current font:

```
Text(rastport,textstring,number);
```

where rastport is the pointer to the RastPort used for drawing, textstring is a pointer to the start of the phrase to be written, and number is the count of letters in the phrase.

The numbers need to be stored as characters in an Ascii string so that the Text() routine can be used. Floating point numbers are converted using ftoa() which will provide an Ascii character string corresponding to a floating point number. I adapted some routines from the text editor in last October's *Amiga Computing* to handle the input of the numbers. Since this was published quite a long time ago, I will recap briefly for new readers.

The normal window polling loop Handle_IDCMP() can be used to detect any keypresses, RawKey events give more information about the keypress.

Information

The message handler is fairly simple, with only Mousebutton and RawKey events. I do not reply to the message straight away after a RawKey event, as I need the information later.

A console device is opened using the OpenDevice() function, passing a pointer to the device name and one to the I/O structure. Unlike other devices, the console device must be used in connection with a window.

The screen and window are already open, and the pointer to the window structure is passed when the console device is opened.

The InitConsole() routine in the source code sets up a dummy console port for reading only, to enable the use of the RawKeyConvert() command. The key handler KeyConvert() uses the RawKeyConvert() command to read the key code, and put the equivalent Ascii code or escape sequence into a chosen buffer. The function takes data from an InputEvent, as described in the include header files. I initialised one of these structures in my header file, and set its Class to RawKey.

Values from the IntuiMessage are put into the structure before the KeyConvert() routine is called. Other inputs include a pointer to a buffer to hold the data, and the size of the buffer.

The routine HandleRawKey() calls the KeyConvert() routine, the length of the output string is returned and the key data will be in the chosen buffer.

If a key code is less than 64, the Ascii equivalent is returned. Some of the other keys generate escape sequences of up to four characters. Mostly a length of one character is returned from KeyConvert(). The routine checks for keys like Return, Escape, Tab, Delete and Backspace, and performs the necessary function.

Anything else of that length is probably a letter, number or other character. A length of more than one character indicates an escape sequence of some sort. This could indicate a cursor key, Help key or one of the function keys.

The source code, sums.c, contains all these routines, Handle_IDCMP(), HandleRawKey(), InitConsole() with full comments.

Library routines

The calculations involved square roots, sines, cosines as well as simple conversions. I needed to use some library routines, rather than write my own. My first thought was to use the routines in the disk-based mathtrans.library.

The prototypes of the routines in each library are in the corresponding header file in the proto directory. Although this library can be used in the same way as the diskfont.library, I found that it had some disadvantages.

The input and output were in four-byte float datatypes rather than in eight-byte double datatypes, and we need all the precision we can get.

Although the Amiga was accessing the routines and returning a value, yet another routine was probably needed to unscramble the result. It was not immediately obvious which one – I find British spelling difficult enough. I include the math.h header file in the source code and use the following code to link the object code with the Amiga IEEE floating point maths library:

```
FROM LIB:c.o+"sums.o"
TO "sums"
LIB LIB:lc.lib LIB:amiga.lib LIB:LCM.lib
```

Next month, a screen display for assembler programmers.

The program on the disk

The program has a C source file, sums.c and a header file, sums.h, on the support disk, as well as the compiled program, sums. The object program opens a screen and window and handles keyboard input until Escape or a mouse button is pressed.

A number consisting of numerals, an optional sign and decimal point can be entered on the left-hand side of the window. It is possible to delete and overtype any of these characters.

The program assumes that each number will not contain more than minus sign or decimal point, or have spaces in the middle. It does not attempt to parse the line, garbage in will have the usual consequences.

Press Return to continue entering another number on the next line. The cursor keys are supported, to edit a previous entry. The program acknowledges the help key being pressed, but there is no Help screen.

Up to 20 numbers can be input at the left-hand side of the window. Pressing a function key can perform a calculation on the number and output the results on the right-hand side of the screen.

Each function key press displays a separate result:

- F1 the square of the number
- F2 the centigrade temperature
- F3 the kilogramme weight
- F4 the circumference
- F5 the kilometre distance
- F6 the square root
- F7 the sine of the angle
- F8 the cosine of the angle
- F9 the tangent of the angle
- F10 the log to the base 10

All angles are assumed to be in radians rather than degrees. The last calculation is a reminder that there was life before calculators – but not as we know it.

Seriously though, this program is not intended to replace a scientific calculator, but a simple illustration of how a number can be input, and the result (after a little crunching) output.

Changing times...

Paul Austin looks at a new breed of Amiga and how to get the best from direct-to-disk recording

The Amiga 4000 is the name of Commodore's latest musical masterpiece, a machine which according to the specs looks to be years ahead of its time.

The machine itself won't be on general release until Spring 93, but the first commercial machines should be in the hands of the developers around Autumn – hopefully giving time for some dedicated software which could take advantage of its immense power.

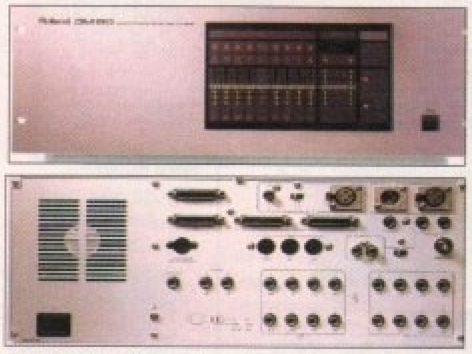
Even if new software isn't available, total downward compatibility is promised with existing Amiga software, so hopefully we won't suffer a painful transition as we did with the infamous 1.3 to 2.0 Workbench upgrade.

The retail of the new machine is expected to be around the £4,000 mark. Nevertheless, if the specs are to be believed it will be worth every penny.

As the name suggests, the new machine will boast a 68040 processor putting it well above the fastest 486 PCs. In real terms, this means speeds 40 times faster than that of a standard A500.

With the introduction of an 040-based machine, the Amiga's real potential will soon be exploited to the full with countless applications all running in concert to provide the ultimate platform for Midi, video, and multimedia.

Like its predecessor the A3000, the new machine has a 32-bit architecture throughout, and to take full advantage of this, and the 040 CPU, Commodore have produced a completely new AA chipset which – among other things – includes a maximum on-screen resolution of 256,000 colours from a palette of 16.7 million. For we musos, perhaps the most exciting addition is the AT&T 3202 Digital Sound Processor, or DSP for short.



Today's state -of- the -art samplers could soon be a thing of the past when the 4000 arrives...

This all-new chip has a small amount of its own fast RAM on board, but perhaps more importantly holds a blisteringly fast maths co-processor which makes it the ideal vehicle for power sound processing.

Commodore have teamed up with Roland to perfect their new sound system which will produced eight stereo channels – 16 channels in total – with custom controller chips for digital sampling and compression.

Perhaps the most amazing innovation is the quality of this sound, which I'm assured will be full 16-bit – in other words, studio quality.

Obviously employing multiple 16-bit samples you'd expect storage to be a nightmare, but it appears that Commodore have even managed to solve this rather thorny problem by employing state-of-the-art compression via a custom compression chip dedicated to packing as much as possible into the available space.

The new machine has been designed to usher in a new era in Amiga-related audio and should allow the A4000 to become the first personal computer to employ voice recognition as a control option.

Apparently the sound processing is so fast that the new machine could make modems completely obsolete. Comms would simply be a matter of plugging in a phone line and kicking up a comms package. 1993 could be the dawn of a new age...

And finally, the Sunrise 12-bit sampling board is already available and will soon be joined by GVP's 14-bit stereo opponent. According to an informed source, a further three direct-to-disk systems are already in development – watch this space and next month's monster music feature for more details.

Not so direct-to-disk

There's a common misconception among many musical computer users in that they consider direct-to-disk recording to be simply a matter of storage.

This I'm afraid, simply isn't the case. Although sufficient storage is a vital element, speed of data transfer is equally important.

For example you could build a system around a standard Amiga by adding a sizeable hard disk. If we assume a recording time of five minutes per 100Mb at studio quality, the average song would easily fit onto a 100/120Mb hard drive.

Unfortunately, life isn't that simple. And of course, what happens when the next classic comes along? If you were to back that amount of data for ever song you wrote, you'd need a couple of hours free for each, a mountain of disks, and a disk box big enough to get a bed in.

A possible solution is to invest in removable hard disks, which generally hold around 80Mb or four minutes, depending on how you look at it. Unfortunately, RHDs are expensive at around £80 a time.

The only other option is to use optical drives which are much cheaper in the long term, at £30 per cartridge. Unfortunately they usually have an access time of between 50 to 60ms, which is well short of the 32ms that most direct-to-disk systems require.

Fortunately this annoying problem could soon be resolved thanks to Power Computing, who are at this moment putting the finishing touches to an upgrade of their existing 128Mb optical which will boast a access of 32ms, which could make it an ideal vehicle for direct-to-disk recording.

The second part of the direct-to-disk equation is the Amiga's CPU, which on a standard Amiga is unlikely to be fast enough to cope with incoming data in such magnitude while running a sequencer simultaneously, so you'll need to upgrade to an 030 accelerator, as well as invest in an optical or RHD. Unfortunately we're still not out of the woods. If you upgrade to a 32-bit processor things will indeed get a lot quicker, but if the data is being imported into the machine via the original 16-bit bus, there's still the chance of the occasional log-jam as the information queues to enter the processor – especially if you're running your sequencer on the same machine.



Could this be the Amiga 4000 in disguise?

The answer is to either run the sequencer separately or invest in a self-contained 32-bit accelerator such as GVP's Combo card which has 32-bit memory, hard disk and accelerator all linked on the same card via a 32-bit bus.

Now you can record direct to hard disk and run your sequencing software without a care in the world, and when your classic is complete, you can save everything to the optical for safekeeping.

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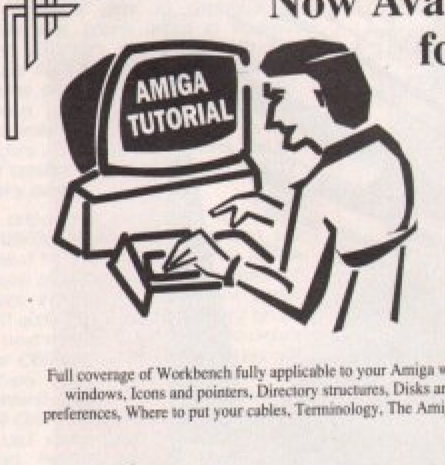
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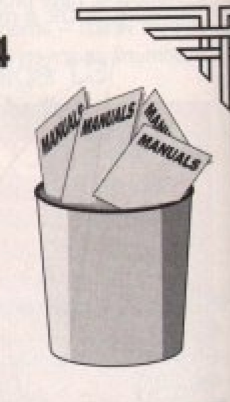
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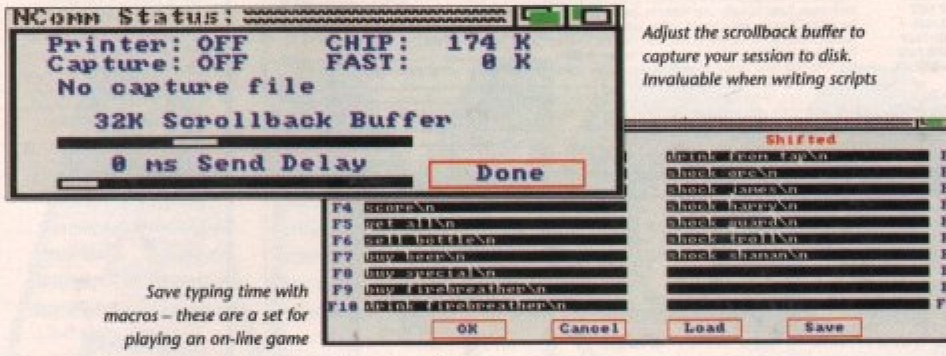
Pat Winstanley discusses the three things you need to enter the absorbing world of comms

To make much use of the comms community you need three things – a modem, terminal software and somewhere to call. The two expensive items are the first and the last – something to call with, and the bills for calling a board in the first place.

In between, and acting as a buffer, is terminal software. This needn't be expensive at all, and in fact can be free, but for the cost of downloading a file, ordering a PD disk or buying a magazine with a coverdisk.

Terminal software is simply a program which allows your computer to tell the modem what to do and vice versa. Remember the old films which bristle with comments such as "I'm currently watching the pirates – their ship is weighing anchor. Over" to be replied to by "Roger and out"?

There the people at opposite ends of the link are relaying instructions to each other, but how much more convenient it would be to simply press a key rather than having to go through the time-consuming process of vocalising commands?



Adjust the scrollback buffer to capture your session to disk. Invaluable when writing scripts

Save typing time with macros – these are a set for playing an on-line game

Comms software (terminal software) does just that. Although most modems offer the facility to dial direct, this can be cumbersome. While most modern phones now have memories enabling you to store regularly used numbers to be recalled at the touch of a button, terminal software does the same thing for comms.

One of the most popular Amiga comms programs is Ncomm. No doubt its popularity began due to it being free, but it has recently moved to become shareware with the release of v2.0, and the reported level of registrations show that not only is it cheap, it's pretty good too.

Many people unwilling to move to the fully registered shareware version now use v9.121, which is the last PD offering.

Like any software which offers a good range of features, Ncomm can be very confusing for the beginner. There are just so many options, all shown on pull-down menus, and nearly all given in jargon.

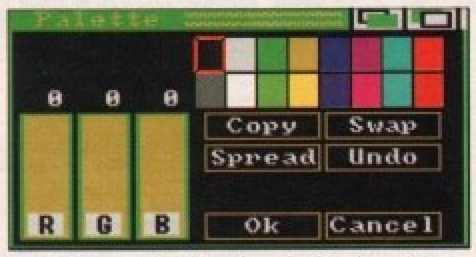
Possible settings range from the initialisation of the modem, an address book of BBS phone numbers, the speed of connection, and even which script – if any – you wish to use.

Trial and error

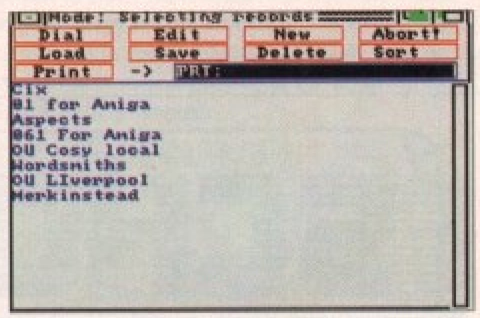
Setting up comms software is a matter of trial and error since phone, modem, computer and BBS all need to be matched to work in harmony. It is the job of the terminal software to hold all the necessary settings and apply them at the right time.

The first thing is to set an initialisation string for the modem. This can simply be an entry like "ATd" which means "attention, dial" or possibly "ATdp" to dial on a pulse exchange.

If you have a Mercury account, and use it for all your comms, the PIN number can go here too. This saves time later when adding entries to the address book, as then only the short number needs entering. Other settings for the modem include MNP error correction if your modem supports it.



Lots of colour can slow things down, but it makes a change...



Room for lots of entries in the address book

Your modem manual will give a list of the various codes and what they do, although you'll probably be following instructions blindly at first.

Once your modem is initialised you can start calling up BBSs all over the world. The address book on Ncomm allows several phone numbers to be saved so that simply clicking on the name of a board will automatically dial it for you.

And that's about all you need to do to connect to a BBS. Set the speed of your modem to its highest, probably 2,400 baud for low-end modems, and virtually everywhere you call will be capable of talking to you.

Once you have found your way around a particular board and know what sequence of keystrokes are required to reach a favourite area, have a shot at writing a script to do it for you. It's not as difficult as it sounds and saves lots of hassle.

A small selection of BBS numbers is included here to get you started. Don't be afraid of looking silly – everyone is a beginner at first and you'll find old hands are more than willing to help newcomers overcome the initial confusion.

Most boards also have lists of other local boards as well as full national and international lists.

Jargon busters

SCRIPT To save time and money, a script is run instead of you having to type in all the commands on a BBS. It's rather like the start-up script used to boot your Amiga into life and simply containing a set of instructions.

OLR Offline readers are real money savers. Instead of logging on to a board and slowly scrolling through messages, replying during expensive online time, an OLR allows you to grab all the messages, download them to disk, and read and reply at your leisure.

BLINK The term used to describe the use of an OLR, presumably so called because you can be on and off a board in seconds rather than minutes.

MNP A series of features which are becoming more common in modems. With these in operation, line noise can be suppressed and downloads can be compressed.

LINE NOISE When the phone line is "noisy" the computer seems to have a life of its own, and merrily scrolls garbage at the typing prompt. Sometimes it can be ignored, but it's usually easier to log off and try again.

ZMODEM This, along with its earlier cousins Xmodem and Ymodem, controls the way files and message bundles are up and downloaded. It checks data during transfer and will resend a batch if there's a problem due to line noise or other causes.

Vorsprung Durch Amos

Phil South looks at generating Amiga windows and menus

My name's Phil South, and I'm taking over the Amos column from Peter Hickman, who's been doing it since issue one without a break. Whew, you must be tired, Pete, have a break.

As you can imagine, Peter's covered a lot of ground since he began the column, but some of you won't have been here from the start (no taste, some people) or will have forgotten most of the stuff that goes beyond, say, two years ago.

In any event I'll be chasing up your questions about Amos, printing Amos news as it happens and providing listings for you to type in. Peter has done a lot on games recently, and although I will be too, I'll also be covering some of the more serious aspects of Amos coding, and printing some programs which do something other than whizz a sprite around at amazing speed – although I have to say that is great fun.

If you are coding something other than a game, you'll have to get used to generating Amiga windows and menus. This is much easier in Amos than it is in, say, AmigaBasic, where you have to specify everything so precisely you might as well draw it on the screen with a Biro.

Getting a screen together is easy enough with the Screen Open command, but what do you have to do to make the screen and its windows act like a normal Amiga program? I've been doing a lot of this sort of thing lately, so try this listing for size:

```
Screen Open 0,640,256,16,Hires
```

Nice and simple to start with. Just a med-res screen to give you that utility look. Now we define our menus:

```
Menu$(1)=" Project    "
Menu$(1,1)="Load         "
Menu$(1,2)="Load As...   "
Menu$(1,3)="Save         "
Menu$(1,4)="Save As...   "
```

That's menu 1 sorted, and as you can see it's a very simple procedure to name the menus, with 1 being the menu title, and 1,1 being a submenu. We do the same for the next menu, but with a little twist:

```
Menu$(2)=" CyberSpace "
Menu$(2,1)="Engage!      "
Menu$(2,1,1)="Are you sure? "
Menu$(2,1,1,1)="Yes + GO!!"
Menu$(2,1,1,2)="No - Abort"
Menu$(2,2)="Morph        "
Menu$(2,3)="ID scan      "
Menu$(2,4)="Alter ID     "
```

You can go on and on adding submenus like 2,1,1,1,1,1 to infinity, but bear in mind that anything other than one or two submenus really gets on the operators' nerves after a very short while. Finally we turn the menus on:

```
Menu On
```

and at this point the menus are active. You can of course turn them off later if you don't want anyone using the menus at a certain point in the program. Finally, for the benefit of our listing, a few cosmetic and diagnostic details:

```
Curs Off : Cls 0
Do
    Print "Menu= ";Choice(1);"       Selection=
";Choice(2)
Loop
```

You can now run the program. Notice how the menu and selection numbers change when you select a different menu item. This is how you know what the user has selected, and it's simply that.

Find out what choice 1 and 2 are and you know what menu item was under the pointer when the user let go of the RMB.

But to really get to grips with the menus, especially if you have a number of them, you have to use the Amos auto menuing system with On Menu On.

This takes a little bit of practice, but it's really quite simple. The revised program starts the same, pretty much:

```
Screen Open 0,640,256,16,Hires
Cls 0 : Curs Off
Menu$(1)=" Project    "
Menu$(1,1)="Load         "
Menu$(1,2)="Load As...   "
Menu$(1,3)="Save         "
Menu$(1,4)="Save As...   "
Menu$(2)=" CyberSpace "
Menu$(2,1)="Engage!      "
Menu$(2,1,1)="Are you sure? "
Menu$(2,1,1,1)="Yes - GO!!"
Menu$(2,1,1,2)="No - Abort"
Menu$(2,2)="Morph        "
Menu$(2,3)="ID scan      "
Menu$(2,4)="Alter ID     "
```

But at this point it diverts into new territory:

```
On Menu Proc PROJECT,CYBER
On Menu On
Menu On
Wait Key
```

This turns on the auto menuing system and waits for you to either make a selection from the menus or press a key on the keyboard. The PROCs you mentioned in the ON MENU ON statement are then defined somewhere else in the program, like right now for example:

```
LISTINGS MACRO2 Procedure PROJECT
   Cls
   Y=Choice(2)
   Locate 0,22 : Print "Menu: Project"
   Locate 0,23
   If Y=1 Then Print "Load what?"
   If Y=2 Then Print "Load as what?"
   If Y=3 Then Print "Save what?"
   If Y=4 Then Print "Save as what?"
   OM
End Proc
Procedure CYBER
   Cls
   Y=Choice(2)
   Locate 0,22 : Print "Menu: Cyberspace"
   Locate 0,23
   If Y=1 Then Print "Yes Or No? Which is it?"
   If Y=2 Then Print "Morph yourself"
   If Y=3 Then Print "Okay you're scanned"
   If Y=4 Then Print "You can't change ID"
   OM
End Proc
End
Procedure OM
   On Menu On
End Proc
```

And there you have it. The responses are put into PROCs and this makes the whole thing a lot simpler. You only have to scan for one variable CHOICE(2) as the first one, the menu itself is chosen for you automatically, and you're sent right to the PROC that deals with that menu.

Once you've got subroutines accepting input from menus, you've got yourself the basis for a mighty fine menu driven utility program.



Menus are made easy with Amos

Amos news

The new versions of Amos are coming thick and fast. The German version has just been shipped off to the land of sausage and broken walls. Easy Amos is shipping, and looks to be every bit as successful as its previous incarnation.

Most importantly, the next stage of Amos development is in the works and preliminary reports say that it's looking very hot indeed. Watch this space.

Write stuff

If you have an Amos question, you can write to me, Phil South, at Amos Almanac, Amiga Computing, Europa House, Adlington Park, Macclesfield SK10 4NP.

On the cards

Ben Pointer improves his corporate image

Desktop publishing packages aren't cheap, and unless you are going to use one professionally it can be difficult to justify the expense. But there is one thing you can "publish" that in one fell swoop can more than recover the outlay – business cards.

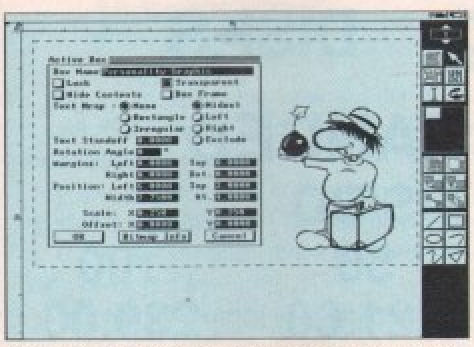
Walk into a stationers or print shop and ask about business cards and you'll probably be shown an album of "ones we did earlier" and a price list that specifies the cost per hundred.

You're losing out in two areas here – firstly you have to pick a "standard" design that at least one person has used before, secondly the price is comparatively high because of the small number of cards being printed.

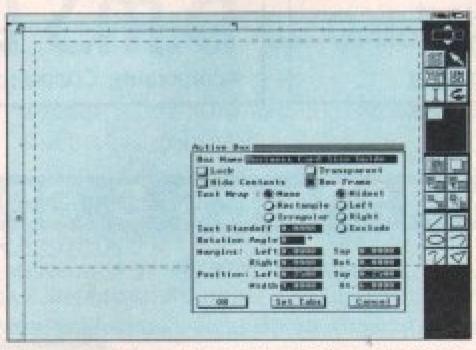
One alternative many people take is to go to a "back street" printers – you know, a guy moonlighting with a printing press in his garage. But the odds are you'll have even fewer designs to choose from and end up with that awful gold lettering on a maroon card.

The way to go is to use your Amiga and desktop publishing software to design the card yourself, save it as a PostScript file, and then give this file to a print shop or printing firm that can handle PostScript.

The first decision to make is the size. It's your card, so you can do what you like, and a big card will certainly get you noticed, but you should bear in mind that a lot of people keep business cards in special wallets or albums that take a maximum size of about 100mm by 65mm. If your card is larger than this it won't fit in the album, and consequently may get lost or thrown away.



If you must use a bitmap graphic, scale it down to at least 25 per cent to increase its output resolution



This is our card-size guide so that we don't end up with bits going missing when the cards are guillotined

So create a new page in whatever DTP package you are using – any standard page size will do for the moment – and create a box that is 90mm wide by 60mm high.

This box represents where the card will be cut after printing and will be our guide – before saving the final PostScript file we will delete it.

Positioning

The next decision is where to put your name and details. It is generally a good idea to use the same type family for all the words on the card (Times, Times-Bold, Times-Italic, Times-BoldItalic for example), and to have your name and/or company name larger or bolder than everything else.

Be extremely careful that you type your details correctly – it's no good noticing mistakes only after you've had a couple of thousand printed, and if you use a business card with incorrect or misspelt details you will give a poor impression.

If you are going to use a graphic or a logo, leave plenty of room for it. You want a lot of white space on your card otherwise it will become difficult to read, and thus less attractive.

Because they will output at an imagesetter's top resolution, use structured (vector) graphics if you can, created with something like Professional Draw or your DTP package's own drawing tools.

Use colour if you like, but investigate the costs and the print shop's requirements before committing yourself.

The next job is to create a "four-up" page ready for output. Don't panic, it's nothing complicated, merely a page that is two cards across by two deep, all positioned edge to edge.

So alter your page size to be 180mm by 120mm, group all the elements of your page design, and move to the top left-hand corner of the page – it helps at this stage if you have a grid size of 1cm and Snap to Grid turned on.

Now duplicate or "clone" your group and position the copy to the right of the original so that the left-hand edge of the copy is exactly on top of the right-hand edge of the original. Make another clone and position it underneath the original, and stick one last clone to the right of that.

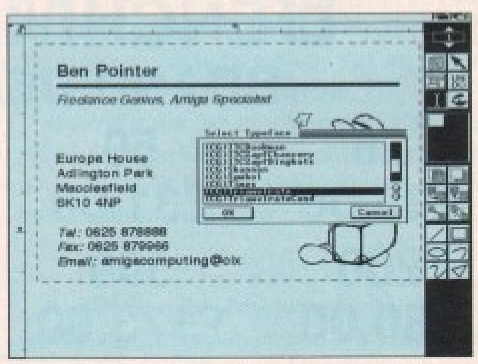
We're finished now, so we can get rid of the 90 by 60mm "guides" we created first of all. Don't worry, the print shop will be intelligent enough to know where to cut them, but tell them the individual card size to be on the safe side.

The final job is to save the page as a PostScript file. Remember that if you have used any fancy fonts on your card you will either have to include them in your PostScript file as "download" fonts, or check that the print shop or printing firm has a PostScript equivalent of the same font (with exactly the same name) on a disk at their end.

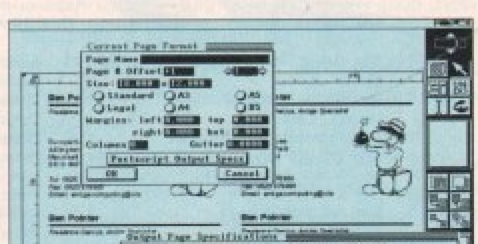
Most print shops will use Macs or PCs, and will not be able to read an Amiga disk, so you need to transfer the PostScript file on to an MS-DOS formatted disk, a format which both the Mac and PC can read.

There are two commercial utilities that will help you do this, Dos-2-Dos and CrossDos, or you can use the famous public domain program MessyDos. Personally I use the just as public domain, but not so famous, MultiDOS utility.

Get at least 1,000 printed – it works out a lot cheaper that way. My last batch of 2,000 mono cards cost me less than £60 from a High Street print shop.



Choice of font is important, and you must make sure that you either download it to the PostScript file or check that the print shop has the same typeface available at their end



Behind the PostScript requesters you can see the "four-up" page that print shops will require for imagesetter or laser printer output. They probably won't need cropping marks

Design matters

The design of a business card is important. It tells the person who is reading it more about you than simply your name, address and telephone number – it also passes a message about your personality, or if it's a company card it gives an impression of what kind of company you work for or run.

To give a classic and over-simplified example, if you use a traditional typeface like Times it will give people who read your card a subconscious impression that they are dealing with a person or company that has traditional or Victorian values.

If on the other hand you use an Avant Garde typeface, this sends a message that the card owner, or his/her company, has a more modern approach to business.

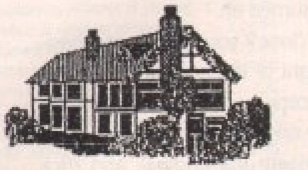
To reinforce this personal or corporate "image" it can be useful to use a graphic or specially designed logo, and this is the main stumbling block in stationers and print shops because any deviation from the standard card designs in their album costs money.

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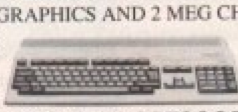
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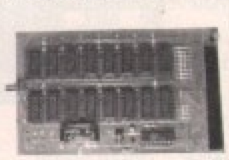
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Chaos theory

From new age pamphlets to high-powered business manuals, fractals have already stamped their mark on the 90s. Order from chaos: Dave Winder

This month, as promised, I shall be taking an in-depth look at one of the more exciting titles to appear as yet for the CDTV – Fractal Universe, written by Jolyon Ralph and David Annal.

I can best describe Fractal Universe as being a wonderful journey of discovery – a look into the world of fractals, a world that is at once fascinating, scientific, natural, artistic, and beautiful.

It would be wrong to think of this CD as just an introduction to the subject – it is far more than that. So let us start at the beginning of this voyage.

I was at once impressed with the professional, polished look and sound of the program. A brief but adequate spoken introduction invites you to either proceed to the main menu screen, where all the options within are open to you, or to go straight into making your own fractal images.

If you do nothing you will be presented with a demonstration slide show. The best advice, at least initially, is to opt for the menu.

The menu system is simple and straightforward – as it should be – although I feel that some of the selections are in the wrong order. There are six options available to you, and they are:

- Generate your own fractals
- See our art gallery
- More about fractals
- Are fractals art?
- Further information
- Help using this disc

Selecting the first option gives you the choice of three fractal generators, allowing you to create fractal images for yourself.

To give you some idea of how long a CD of this quality takes to write, I can remember helping to test the first of the three generator programs over a year ago.

Trees was programmed using Amos, and is a fine example of what can be achieved from this language. As the name suggests, fractal trees are what this is all about.

There are many options available to allow you to produce an infinite number of different examples. It is also the fastest of the three programs when it comes to rendering the images.

The second of the three is a Mandelbrot generator, producing the most familiar of fractal images. Because of the complex nature of the Mandelbrot set, and the related Julia set which is also available from this option, the images themselves do take a while to actually render.

The further into the set you zoom, in other words the more you magnify a specific part of the image, the longer it takes as the image becomes more and more complex.

The last of the three is a fractal plasma generator. The rendering is fairly quick – definitely speedy when compared to the Mandelbrot program – and the colour cycling options are excellent.

Going back to the main menu and selecting the second option takes us into the Fractal Universe art gallery. There are some 400 examples of different fractal images on the CD.

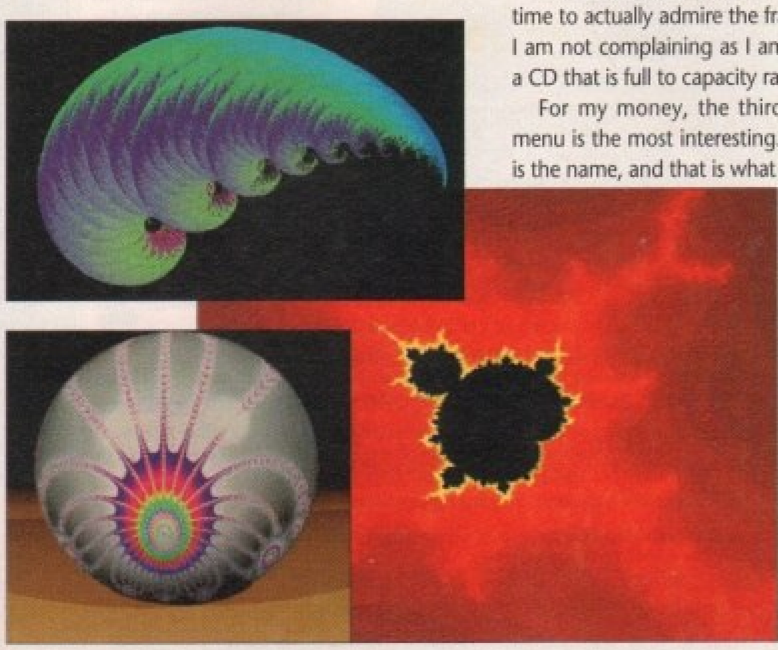
Slide shows

You can decide if you want to see these in one of three slide shows, each of different length and choosing the images to include randomly so you will get a different selection each time you visit the gallery.

You may want to spend some time admiring individual images, and there is an option to allow for that as well. The animated fractals slide show seems to be padding to me.

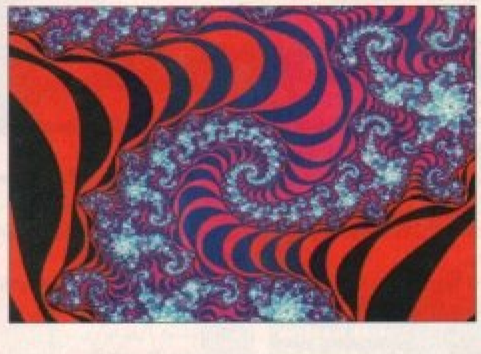
The animations cycle too quickly so there is little time to actually admire the fractal image. Mind you, I am not complaining as I am much happier seeing a CD that is full to capacity rather than half empty.

For my money, the third option on the main menu is the most interesting. "More about fractals" is the name, and that is what you get.



The first selection within this group explains what fractals actually are, followed by a history of the matter in the next. Both these sections are superbly narrated – the voice is authoritative but friendly and most of all the sound quality is excellent!

Left and above right: Four examples of the beauty of fractal imagery taken from Fractal Universe.



Also accessible from this group is a section on fractals in nature, and a selection of different fractal images complete with the mathematic formulae that is used in their creation.

The fourth option from the main menu deals with the debate over whether fractal imagery is really art or not. The demonstrations of the effect that colour has on the way that the same fractal image can be interpreted is interesting, but the question posed by the section title isn't really explored at all. Once again I felt that I had stumbled across another bit of padding.

The remaining two options include an information screen that credits the people involved with the project, as well as the software that was used in the development of Fractal Universe.

The online manual is accessed from here, and provides enough help to enable someone who has not used the CDTV before to be able to explore the CD without any problems.

Music

It would be amiss of me to review this program without mentioning the music. It is pleasing to note that there is not a soundtrack blasting its way all over Fractal Universe, but where there is music it is damn good.

For example, during the art gallery slide shows the music is completely complementary to the images, helping to provide a super atmosphere in which to view the beautiful imagery of the fractals themselves.

It doesn't matter if you don't think you are interested in fractals – believe me, you will be after watching this. Even if you think you have fractals all wrapped up, you will be surprised. I thought that way, but I still learned a good thing or two from watching Fractal Universe.

Fractal Universe is available now, priced £29.95 and by the time you read this there should be French, Italian, and German versions available as well.

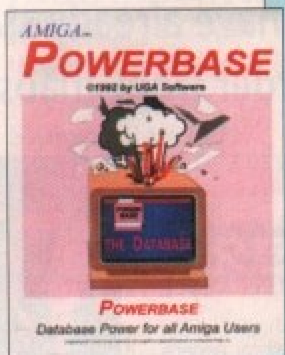
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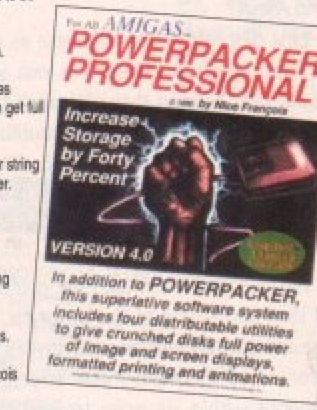
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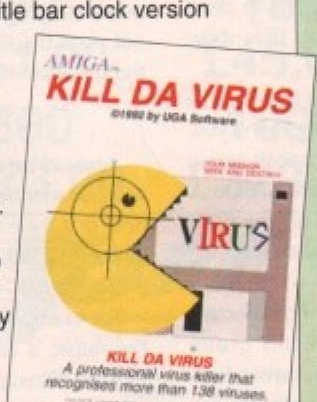
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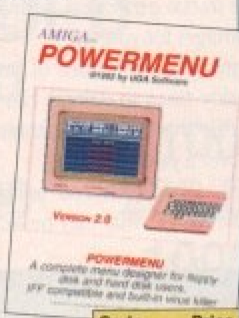


- Three versions included from a title bar clock version through a custom screen 3D gadget version (KDV5).
- Brainfile which is being updated through PD channels and of course on Newsflash so you will always have an updated version.
- Store your bootblocks on disk so you can restore them when your bootblock is destroyed by a nasty boot virus (Saddam etc etc).
- Checks your memory and will kill any live virus to avoid further spreading on healthy disks. Any unknown bootblock will be analysed with a 'learn' option so next time it can be identified.
- Userfriendly menus so easy to work with.
- Full support of Kickstart 2.0 and hard disks.

Code	Price
9863	£14.95

POWERMENU V2.0

Features:



- Userfriendly utility to produce your own (hard) disk menu's
- Ideal for floppy and hard disk users
- Full support of mouse, joystick and keyboard
- Multitasking
- IFF picture (background pictures) and Amiga font support
- Big Agnus support
- Built in virus protector
- Comes with PD menu compiler so you can spread your menu
- Several system functions (chipmem on/off, time) included

Code	Price
9862	£17.95

HUGE PROFESSIONAL

A complete program for producing icons sprites, brushes and bobs.

Features:

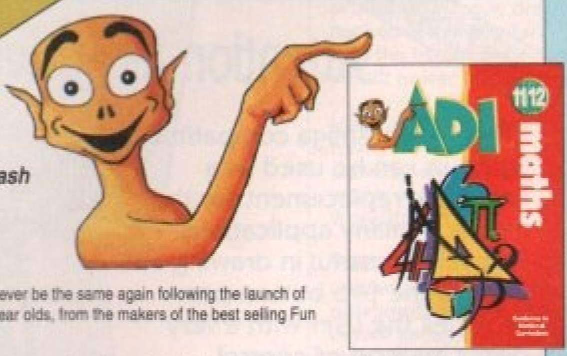


- Supported formats: Image (C & ASM), Sprite (C & ASM), Brush (ILBM), Bob (Amiga Basic) and icons (Workbench)
- Full conversion ability between all supported formats
- Icon editor built in, enabling full icon properties modification
- Functional & user friendly interface, keyboard shortcuts
- Complete user control over display mode & palette
- Advanced drawing capabilities, including 6 drawing tools, flood fill & basic dithering technique
- Font support, palette control & source code palette
- Bitmap editor capabilities, including cut/paste, mirror & rotator and 2 pages for drawing
- Advanced zoom concept, featuring custom magnification trailer zoom & co-ordinates display

Code	Price
9855	£17.95

BARGAIN OFFERS

ADI



Cosmic character crash lands into educational software...

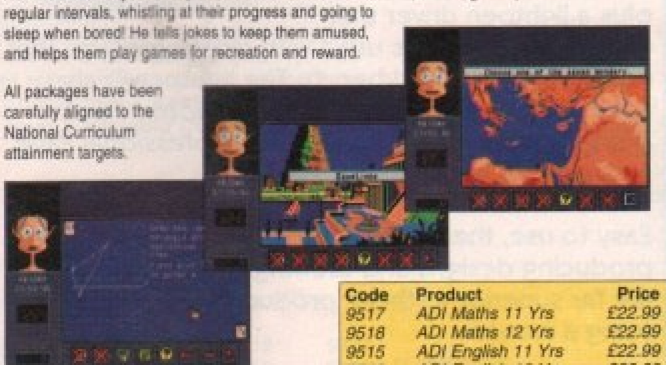
Home study will never be the same again following the launch of ADI for 11 to 14 year olds, from the makers of the best selling Fun School range.

This captivating character entertains and delights students with a range of sophisticated educational programs, endearing himself to them with his lovable personality.

Maths, English and French are taught with the assistance of this knowledge extra terrestrial who guides, helps and tutors the student through each progressive subject.

ADI uses his many facial expressions to interact with students, checking their performance at regular intervals, whistling at their progress and going to sleep when bored! He tells jokes to keep them amused, and helps them play games for recreation and reward.

All packages have been carefully aligned to the National Curriculum attainment targets.



Code	Product	Price
9517	ADI Maths 11 Yrs	£22.99
9518	ADI Maths 12 Yrs	£22.99
9515	ADI English 11 Yrs	£22.99
9516	ADI English 12 Yrs	£22.99

Graphic Station



Paint! Design! Convert! Communicate!

It's all so easy with

Only £4.50

THE GRAPHICSTATION

100% A500 PLUS COMPATIBLE



● Artistic aspirations? Picturesque is colourful, so very easy to use and ideal for all kinds of artwork

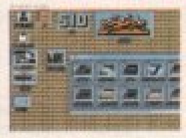


● Create unique designer fonts. Make your own typefaces with FontMaster, and then add a shadow with ShadowMaker



● Transfer files to other formats. With your own GraphicStation you can instantly use graphics and text on other types of machines

● Trouble with sorting files and directories? The Directory Manager makes simple work of otherwise quite complex operations



● Want to stylise your user interface? With Huge you can create your own icons and click on your own works of art to make things happen on screen

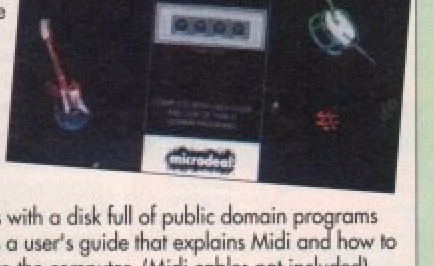
● Creative printing. PrintStudio helps you print text, screen grabs and images created in ANY paint program, with instant fine-tuning all the way

Code	Price
9876	£4.50

Pro Midi Interface

PLAY IT AGAIN WITH PRO MIDI INTERFACE!

This attractive wedge shaped Midi Interface incorporates MIDI-IN, MIDI-THRU and TWO MIDI-OUT ports. The flat ribbon cable plugs straight into the Amigas serial port and uses high quality computer standard ribbon cable that eliminates the possibilities of data loss between the computer and interface.



PRO MIDI INTERFACE can be positioned alongside the computer rather than behind it so that swapping cables from one Midi device to another becomes a simple task.

PRO MIDI INTERFACE comes with a disk full of public domain programs allowing immediate use, plus a user's guide that explains Midi and how to connect up different devices to the computer. (Midi cables not included).

PRO MIDI INTERFACE is a full professional standard interface, fully compatible with all Midi keyboards, drum machines etc.

Code	Price
9513	£22.95

Vidi-Amiga

THE COMPLETE COLOUR SOLUTION

Thanks to a breakthrough by Rombo Productions in frame-grabbing technology, you can now produce good colour images quickly and cheaply with Vidi-Amiga and the VidiChrome colour software.

FULL PAL SCREENS

- *Take snapshots in 16 shades live from video*
- *Multiple frame store*
- *Dynamic cut and paste*
- *Full palette control*
- *Hardware and software control of brightness and contrast*
- *Compatible with all video standards*

It includes full colour capabilities with additional Vidi-Chrome and also comes with an RGB Splitter which enables the 3 primary colours to be digitised separately without the need for a conventional filter set. And for a limited period we are including, free of charge, the photon paint package Deluxe Paint II

Normal Price £199.00



Code	Price
9936	£99.95

AMIGA COMPUTING BARGAIN OFFERS

ACTION REPLAY Mk III

THE WORLDS MOST POWERFUL FREEZER-UTILITY CARTRIDGE

Features:

- Save the entire program in memory to disk
- Super powerful trainer mode
- Improved Sprite Editor
- Virus detection
- Burst nibbler
- Save picture and music to disk
- PAL ot NTSC modes selectable
- Slow motion mode
- Many more instant CLI commands
- Restart the program
- Full status reporting
- Powerful picture editor
- Improved debugger commands
- Music sound tracker
- Autofire manager
- Joystick handler
- Diskcoder
- Set map
- Preferences
- Disk monitor
- Improved printer support
- Dos commands
- File requester
- Boot selector

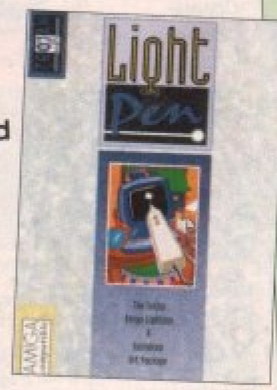
For Amiga A500/A500+/ 1500/2000

Code	Price
9512	£57.95

TROJAN LIGHT PEN

Attention All Designers!

The Trojan Amiga compatible lightpen can be used as a complete replacement for the mouse in many applications. Particularly useful in drawing and design, the two button pen provides the user with a very direct method of control.



This package also includes KWIKDRAW - a lightpen compatible drawing program, plus a lightpen driver that allows the pen to be used with most programs that run from Amiga Workbench. The lightpen is also compatible with: *DPaint III* and *IV, Photon Paint, Workbench 1.2/1.3, Battlechess, Professional Page, Music-X and Audiomaster V2.*

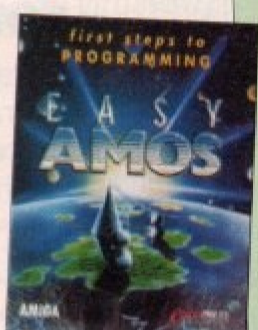
Easy to use, the Trojan lightpen will have you producing designs and drawings that are far superior to those produced using a mouse.

Code	Price
9870	£34.95

EASY AMOS

Bring Your Amiga to Life!

Have you ever dreamed of making your Amiga really work for you? Or wanted to harness to the full its awesome hidden power?
Well now you can!

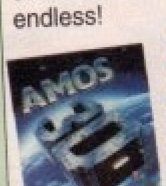


Even if you're a complete beginner, Easy AMOS will propel you into a fascinating new world where you will quickly learn how to:

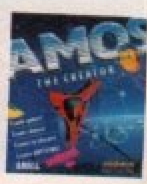
- Produce impressive graphical effects
- Create and animate colourful objects
- Scroll large text across the screen
- Make your Amiga actually talk to you
- Add exciting music to your creations

Code	Price
9504	£29.95

Soon you'll be turning your craziest ideas into reality: Computer art, cartoon animations, home finance, educational software, demos, arcade games, adventures – the list is endless!







Code	Product	Price
9834	AMOS The Creator	£34.99
9835	AMOS The Compiler	£19.99
9836	AMOS 3D	£24.95
9837	Bundle of all 3	£74.99

AMIGA GAME MAKER'S MANUAL

Amiga Game Maker's Manual – with AMOS Basic

by Stephen Hill

Stephen is the author of Sigma's best-selling *The Game Maker's Manual* for the Atari ST - and he's the author of the new AMOS (Amiga Operating System) Manual, so nobody is better placed to write this book.

The creator of AMOS, Francois Lionette, has produced the most powerful games programming system. With it, Amiga games equivalent to such best sellers as Xenon 2 and Blood Money can be produced – it's so straightforward that many people will buy an Amiga simply to run AMOS Basic.



The contents include: Game planning - graphic design, mock-ups and sprites; Shoot-'em-ups - high speed AMOS sprites, fire control, collision detection, background animation; Simulations - from simple 3D movement to flight simulators; Role playing - characters, scenarios and magic; Adventure games - plans, rooms and commands; Animation, scrolling, sound and 3D; Links to assembler. Numerous tested, working programs illustrate the book.

Code	Price
9886	£16.95

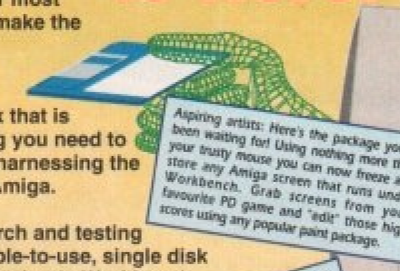
BINDER



£5.95 9509

The WORKSTATION is here!

It's no secret that the Amiga is the most powerful home computer of them all. What has remained a mystery for most newcomers is how to make the most of its immense potential. Now Amiga Computing has produced a floppy disk that is packed with everything you need to take the hassle out of harnessing the inbuilt power of your Amiga.



Aspiring artists: Here's the package you've been waiting for! Using nothing more than your trusty mouse you can now freeze and store any Amiga screen that runs under Workbench. Grab screens from your favourite PD game and "edit" those high scores using any popular paint package.

Many months of research and testing have resulted in a simple-to-use, single disk replacement for Commodore's Workbench which we're calling The WorkStation.

Got a faulty floppy? When vital disks get damaged, you'll now have the chance to try the seemingly impossible mission of recovering all your work. Workbench's geriatric DiskDoctor can be sent into retirement by this super utility!

This indispensable collection of utilities, including some outstanding shareware never before assembled together on one disk, is now available for just £3.50.

The ability to design custom icons as standard is virtually unique to computers in the Amiga's class. The WorkStation turns your Amiga into a comprehensive design studio, providing a wide range of graphic tools that can make icon creation child's play.

It's too good to miss! £3.50 9958

RE-INK



£12.95 9998

SPELL!

This unique package makes practising spelling loads of fun. Suitable for children from 5-15, SPELL! allows the user to learn at his or her own pace. It includes five different tests, each making use of more than 5,000 words – so much variety that you'll never get bored.

£8.95 3614

STEREO MASTER

Stereo Master is the latest full feature STEREO sound sampler for the Amiga. It contains DUAL analogue to digital convertors, ensuring the ultimate in 8-bit sample quality. The system can record in high quality stereo from its twin phono input sockets, sampling anything from a portable CD player to live radio.

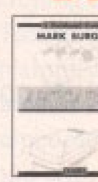
£34.95 9814

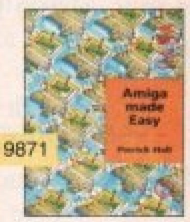
AMIGA MOUSE AND MOUSE MAT

Elegant high quality mouse from Gasteiner. Designed to use with any mouse driven application. Also, our mouse mat with the *Amiga Computing* logo is the perfect desktop environment for your mouse, with its specially designed perfect grip surface.

Mouse	£19.95	9988
Mouse Mat	£4.95	9508

BOOKCASE





£12.95 9871

£14.95 9866

AMIGA COMPUTING BACK ISSUES

May 1992 + 3.5in disc	£3.10	9747
June 1992 + 3.5in disc	£3.10	9748
July 1992 + 3.5in disc	£3.10	9749

Back issues from other months are available – phone for details
Add £2 Europe/Eire, £3.50 Overseas for postage per issue



AMIGA COMPUTING BACK ISSUE BUNDLE

Feb 1992 - Jul 1992 + 3.5in disc £18.00 9894

Bundles include the cover discs for each issue.

AUTO MOUSE/ JOYSTICK SWITCH

Now you can instantly select either your mouse or joystick by simply a touch. You won't need to fumble under or behind your computer to swap your mouse and joystick cables ever again. It's easy to install and ideal for 2 player games.

£17.95 9882

AMIGA COMPUTING

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AMC8

Super Mario takes over

With the leaked news that Nintendo may be interested in a buy-out of Commodore International, Rock Lobster can exclusively reveal some of the Japanese giant's plans for a major reshuffle this side of the Atlantic.

OUT goes Steve Franklin, long-serving Commodore UK boss, to be replaced by the high flying Mario, of Super Mario fame

OUT goes Kelly Sumner (head of sales) IN goes Mario's lesser known brother Luigi

OUT goes Andrew Ball, PR man, IN goes MegaMan

Commodore UK were unable to comment on their future sales strategy and how it might change when it is directed by a collection of multi-millionaire sprites with the mental capacities of lobotomised hedgehogs (Sonic not included), but inside sources at Apple and IBM have expressed worries that Commodore might finally get their act in order.

Sacred cows No3 ANORAKS

Anoraks: the name given since time immemorial to people who think computers – and the Amiga in particular – are more important than clean underwear, social acceptability, and fresh smelling-breath.

This group includes those who would rather sit in and code a new hex editor than go to a party, sad little boys whose contact to the outside world is restricted – by choice – to a modem and a phone line, and the kind of person who thinks it really is important to differentiate between a button and a gadget.

Though gifted with a blind sense of their own personal importance to the Amiga scene, these people are about as essential to the average Amiga owner as a read/write error, and no more welcome in the whole than the discovery of a cockroach in your frying pan.

Snippet

Guess how long the A1500/2000 machines are going to last before being discontinued by Commodore in favour of the 68020-based machines to be released in the autumn. Six months? Less?

Of course, Commodore will tell us all in good time so that none of you buy a machine that's made instantly obsolete, won't they? And then, there are the little fairies at the bottom of my garden...

ROCK lobster

Cards killed by new chips?

All those high-end graphics card manufacturers out there must be sweating a bit at the prospect of Kickstart 2.1 and the AA chip set.

When the new Amigas go on sale later this year, they may well include these innovations and, if so, could put an end to much of the demand for add-on graphics boards.

Let's face it, 256,000 colours on-screen in hi-res interlace would look fairly photorealistic to your average punter or businessman, and short of TV quality stuff they're bound to be adequate for most uses. It looks like we've found out why Black Belt stopped producing their HAM-E board.

Too good to be true, eh? I mean, wouldn't you just love to buy a standard Amiga with graphics so colourful you could sneer contemptuously at your SVGA PC owning friends, even those with fancy graphics adaptors costing hundreds of pounds?

Call me a petty snob, but I for one can't wait.

Competition winners

The response to our System Swapping Spectacular competition in the April issue was overwhelming. It seems a huge number of you would like the advantages offered by a ROM switcher and alternative Kickstart ROM.

However, there have to be winners and losers, and the ten lucky winners of the Phoenix Kickstart ROM sharer and Kickstart ROM, who gave the correct answers are listed here.

Koubdjanian Sylvain, France
Glen Lown, Sprowston
M Blockey, Carlton
D A Robson, Middlesborough
C Goodman, Fareham
Paul Handy, Chesterfield
Michael Frenzel, Southport
Lesha Simmons, Slough
Danny Wardell, Stevenage
Anthony Allison, Airdrie

The prizes are on their way from the *Amiga Computing* office as this is written. Congratulations to the winners, and keep trying all you unlucky second placers.

Remember duplicate entries will be burned on sight, so if we receive two postcards with identical handwriting from Higher Crumpsall in Manchester next month – you know who you are – we'll torch them as we did the last lot only five minutes ago.





THE ALL NEW AMIGA 600 PACK ★ *Exclusive to Futureworld* ★
Very latest Amiga Featuring:

- ★ On-site maintenance
- ★ Kickstart/Workbench 2.05
- ★ Built-in TV/Modulator ★ Smart Card Slot
- ★ IDE Hard Disk Controller
- (Optional 20Mb Internal Hard Disk)

A600 Pack:	
A600 (incl Deluxe Paint III and Game)	RRP £399.99
Astra Ten Games Pack	RRP £299.78
GFA Basic	RRP £49.95
	TOTAL RRP=£679.72
But yours for an unbelievable	£399.99

A600 HD Pack: As above but featuring 20Mb Hard disk. TOTAL RRP=£779.72. But yours for an unbelievable £499.99
NB: HD Version does not include DPIII or Game.

ALL OUR AMIGA PLUSES NOW COME WITH A MASSIVE 2 MEG OF RAM

AMIGA 1.3 MEGAPACK
- Stocks VERY limited -

AMIGA 1.3 VERSION COMPUTER Only version guaranteed to run all Amiga software	RRP £349.95
1 MEG UPGRADE BOARD Increases your A500 to a massive 1 Megabyte of RAM	RRP £29.95
WICKED 50 GAMES PACK 50 great games to get you going!	RRP £24.95
FIGHTER MICROSWITCH JOYSTICK Essential to play your 50 games	RRP £7.99
QUALITY MOUSEPAD	RRP £6.99
TAILOR MADE DUSTCOVER	RRP £6.99
16 NIGHTS HOLIDAY ACCOMMODATION	
•PLUS• PD DISK PACK CONTAINING Wordprocessor • Spreadsheet • Database • Virus Killer • Backup Utility	

TOTAL RRP £426.82
But yours for an unbelievable... **£299.95**

GAMESMASTER PACK

A500+ CARTOON CLASSICS PACK Complete with Bart Simpson • Captain Planet • Lemmings • D Paint III	RRP £399.95
2 MEG RAM BOARD (latest blue pcb design) Increases your A500+ to a massive 2 megabytes of RAM	RRP £59.95
ASTRA TEN GAMES PACK Datastorm • Dungeon Quest • E Motion • Grand Master Slam • Kid Gloves Powerplay • RVF Honda • Shufflepack Café • Soccer • Tower of Babel (NB All games individually packaged)	RRP £229.78
WICKED 40 GAME PACK 40 great games to get you going!	RRP £24.95
2 FIGHTER MICROSWITCH JOYSTICKS Not one but two quality joysticks	RRP 15.98
QUALITY MOUSEPAD	RRP £6.99
TAILOR MADE DUSTCOVER	RRP £6.99
•PLUS• PD DISK PACK CONTAINING Wordprocessor • Spreadsheet • Database • Virus Killer • Backup Utility	

TOTAL RRP £744.59
But yours for an unbelievable... **£399.99**

PROFESSIONAL MUSIC PACK

A500+ CARTOON CLASSICS PACK Complete with Bart Simpson • Captain Planet • Lemmings • D Paint III	RRP £399.95
2 MEG RAM BOARD (latest blue pcb design) Increases your A500+ to a massive 2 megabytes of RAM	RRP £59.95
MUSIC X 1.1 (latest version) Renowned as the best professional package on the market	RRP £149.95
QUALITY MIDI INTERFACE Now you can hook up to any midi keyboard	RRP £34.95
2 x MIDI CABLES Not one but two quality cables	RRP £13.98
QUALITY MOUSEPAD	RRP £6.99
TAILOR MADE DUSTCOVER	RRP £6.99
•PLUS• PD DISK PACK CONTAINING Wordprocessor • Spreadsheet • Database • Virus Killer • Backup Utility	

TOTAL RRP £672.76
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Value pack comprises:-

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10 DS/DD DISKS	RRP £9.99	MOUSE HOUSE	RRP £6.99
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Dedicated Commodore monitor
Colour co-ordinated to compliment your Amiga
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CDTV KEYBOARD	RRP £49.99
CUMANA SUPER SLIM DRIVE	RRP £79.99
GFA BASIC Used with above transforms CDTV into a fully programmable Amiga	RRP £79.99

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NEW AMIGA 1500 featuring Workbench/Kickstart 2, The Works, D Paint III, Home accts etc	RRP £699.95
ASTRA TEN GAME PACK 10 individually pack games (see A500 Gamesmaster pack for details)	RRP £229.78
GFA BASIC Essential for basic programming	RRP £49.99
CARTOON CLASSICS SOFTWARE Bart Simpson Vs Space Mutants • Lemmings • Captain Planet	RRP £79.97
2 FIGHTER JOYSTICKS	RRP £15.98
QUALITY MOUSEPAD	RRP £6.99

TOTAL RRP £1082.62
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NB: This machine requires a TV/Modulator (£24.95) if it is to be used with a television

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- CUMANA CAX 354 SLIMLINE DRIVE £54.95
- POWER PC 880B with Blitz/Virus hardware £69.95
- POWER PC880B+ X-COPY PROFESSIONAL £99.95
- DUAL POWER PC880B complete with Power supply £124.95

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  0 Meg RAM £379.95•2 Meg RAM £429.95•4 Meg RAM £499.95•8 Meg RAM £679.95
- GVP 105 MEG HARD DRIVE WITH RAM EXPANDABLE TO 8MB
  0 Meg RAM £579.95•2 Meg RAM £629.95•4 Meg RAM £729.95•8 Meg RAM £899.95

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Wordprocessor•Spreadsheet•Database•Virus Killer•Backup Utility

STAR LC20 MONO PRINTER
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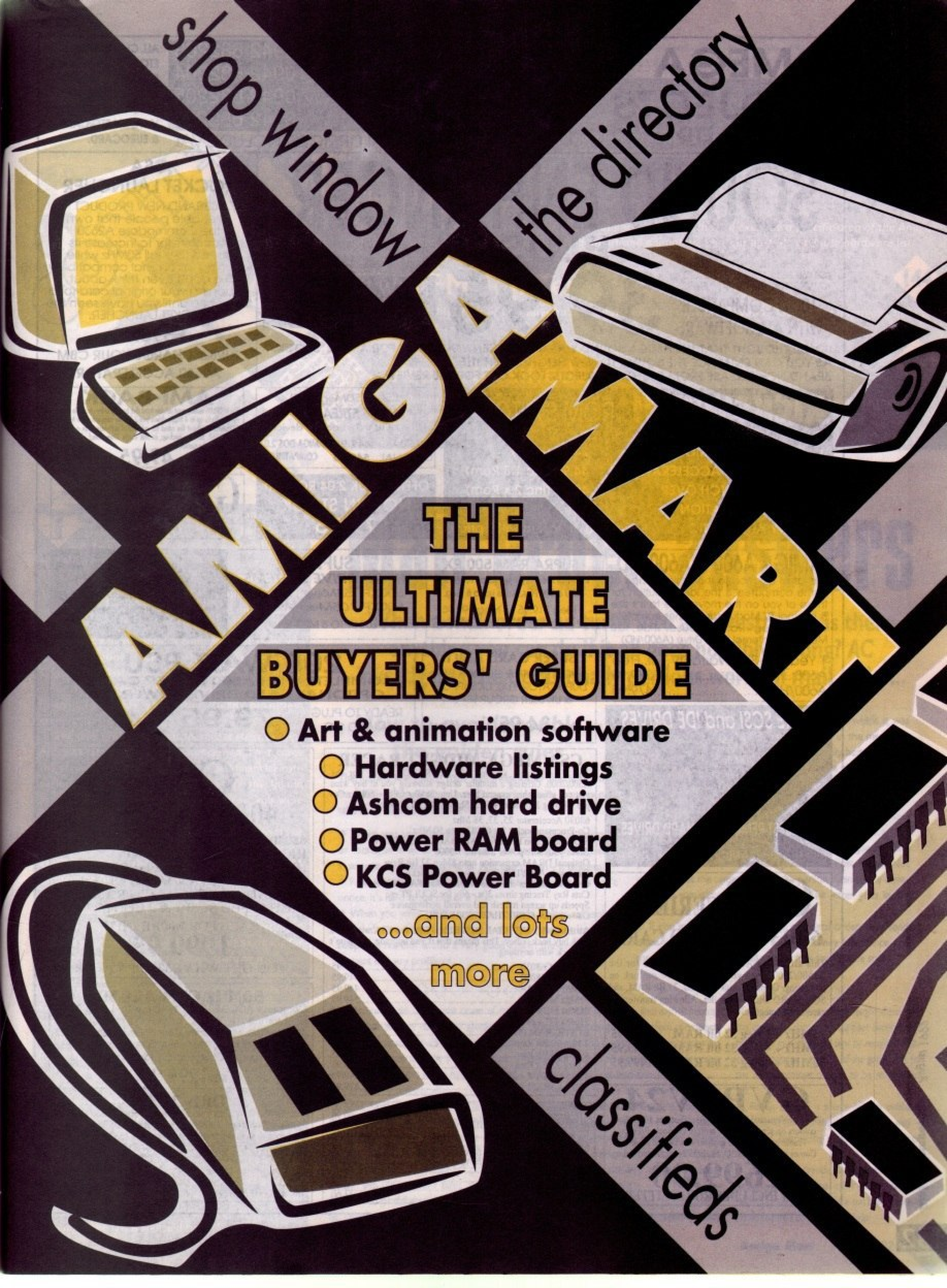
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CONTENTS

A-Z OF VFM

Mail order answers

When a mail order ad turns into an investment, is there anything you can do if it all goes horribly wrong? AC investigates the occasionally perilous world of mail order...

Thousands of small companies and traders have gone out of business in the past year or two, thanks to the well-publicised recession.

Even the most optimistic government analysts acknowledge that a few more companies will go under before the sun starts to shine on the Stock Exchange once again.

So what can you do if a company that owes you money or goods goes down? According to the Consumers' Association, publishers of *Which?* magazine, if you have paid an advance payment or a deposit for goods, you automatically become a creditor.

The only problem is that there is a strict pecking order as far as creditors are concerned. First come the secure creditors such as banks and financial institutions, then other organisations like the Inland Revenue. Guess where you end up? Yes, you were right, you're last in the queue.

The first thing to do is to contact the receivers or liquidators, usually a reputable firm of accountants, and put your case in writing. Under the 1986 Insolvency Act, you're entitled to be told what is going on.

You could just be lucky. If you've ordered and paid for some equipment and it happens to be packaged up with your name and address on the box, ready for despatch, you have a good case for claiming it.

Similarly, if you have returned goods for repair or warranty examination, they are still yours. In this case, you should consider visiting the premises in person and speaking directly to the liquidators or administrators with a view to recovering your property.

Take some proof of identity and all the correspondence that you have regarding the transaction such as receipts or even just a cheque stub.

If you've paid by credit card and the purchase price exceeds £100, so much the better. You can claim a refund from the credit card company.

Not surprisingly, they don't like that one little bit and it's one of the reasons credit card companies quote for the high charges they levy on traders and borrowers alike. Stick with it though – you'll win in the end as the law is well and truly on your side.

How to avoid trouble – the golden rules

There are a few golden rules about mail order purchase which may well sound obvious, but it's surprising how many people take no precautions whatsoever.

- When you see something you like, check that the magazine or catalogue is up to date – it's no use sending off cheques in answer to 1989 advertisements. And don't laugh – it happens!
- Read the advertisement carefully. If there are parts you don't notice, it's hard to get out of it later.
- When you write off for and return goods, always remember to include your name and address – and make sure it's legible! A telephone number is also a very good idea in the event of subsequent delivery problems.
- Keep a copy of the order and the date on which it was sent. Keep any correspondence you receive in the meantime and copies of that which you send. It's actually better to keep photocopies of the original than keep the file on disk – modern courts are still wary of computers!
- Make notes of any telephone conversations you have with the company and the names of the people you speak to – notes made at the time can amount to powerful evidence.
- Never, never send cash through the post – if it goes missing you'll get absolutely no sympathy from the Post Office. Not only that, but the temptation for the person opening the envelope can sometimes prove too great. The letter goes in the bin and your money goes in their pocket.
- If you intend to pay by cheque or postal order, only send them when specifically asked to send money in advance and then make sure you keep all counterfoils and cheque stubs.

Delayed orders are a frequent cause of complaint. What can you do? Strictly speaking, the mail order company shouldn't cash your cheque or take any money until the order is fulfilled. It isn't unlawful, however, so you have to approach the problem in a different way.

If the goods don't appear, write to the company's head office stating that you need to take delivery by a certain date as "time is of the essence".

This powerful piece of legal talk puts the ball straight into the supplier's court. Provided the time allowed for delivery is reasonable, a week or ten days for example, you become entitled to a refund as soon as the time limit expires because the mail order company is in breach of contract.

You may also be entitled to claim reasonable expenses incurred as a result of the delay, especially if you had to go elsewhere to buy it.

Damaged goods are another problem encountered in the mail order game. The risk is an inherent one and most of it rests with you. If the goods are damaged in transit, you will have to pursue the matter with the carrier or post office – it's not the supplier's responsibility unless the packaging is to blame.

If the goods are defective, that's another matter. You have the same rights under the Sale of Goods Act as if you had bought them over the counter. Contact the supplier immediately, preferably in writing and sent by recorded delivery, and arrange for return of the goods. Ask for the return carriage charges to be reimbursed, too.

Finally, there is a source of help available that might just tip the balance your way – Amiga Computing's Customer Services Manager.

Her job is to provide advice to readers who experience problems after responding to adverts in the magazine. We can't guarantee a result, but we'll do our best to help!

Shop Window

***Amiga Mart*'s monthly guide to the latest Amiga products**

Ashcom ADDHard 45Mb

The new Ashcom ADDHard drive is easily the cheapest 45Mb Amiga 500 hard drive available. Its £265 asking price is in fact lower than some suppliers will charge for the 20Mb A590 and at least £100 cheaper than most 40Mb drives, so it's not surprising that it holds a very high spot in this month's VFM Top Ten.

The drive is aimed at the total novice user, and is supplied ready formatted with Workbench installed ready to go. Users can specify Workbench 1.3 or 2.04 depending on their machine's Kickstart ROM, so this really is a plug-in-and-go product.

No bad thing for a hard drive, you might think, especially as hard drives come second only to printers in the headache stakes, but there's a price to be paid for the user-friendliness and extremely low price.

The unit has a simple Quickstart manual in the form of an A4 sheet of instructions, but no software. This isn't needed at first because the drive is already set up, but if something were to go wrong, such as a read/write error – rare in hard drive circles – or even a simple validation error, the user would have to resort to sending the unit back under warranty or using a shareware program such as Fixdisk.



Problems such as this will be very rare with a new hard drive, and Ashcom will be distributing a full set of software utilities to users when available, so the ADDHard doesn't suffer too much as a result. It's still an unmissable bargain.

The physical dimensions of the unit, as it has no on-board memory space, are gratifyingly small. The sturdy plastic case is smaller than the A590 casing, and though not sleekly styled is no ugly duckling. It certainly doesn't cause any desk space problems.

It doesn't require an external PSU, so there's no power socket, but there is a DMA through-port. Speed is not the ADDHard's forte, but for those upgrading from floppy-based systems it will still seem very fast.

In the serious user's hard drive terms, ADDHard doesn't trouble the likes of the GVP drives or the 500AT reviewed below, but as it is designed to make hard drives a possibility for the sort of users who couldn't normally afford them, it should do well.

In such terms, ADDHard deserves to succeed, and its almost silly pricing should guarantee it a place in many A500 setups. Full marks to Ashcom for an excellent punter product.

Ashcom Design and Developments Ltd
Supplier: Ashcom
Phone: 0530 411485
Price: £265 (45Mb)

IVS Trumpcard 500AT

Interactive Video Systems (IVS) have for long been producing good, reliable hard cards for the A1500/2000 range, but have never really made a push in the A500 market.

The 500AT is an attempt to cash in on the upgraders who are considering RAM and hard drive combinations to boost the power of the low-end Amiga, and is aimed at those who might otherwise consider an A590 or a GVP Impact Series II.

The drive is mounted in a very sleek GVP-style plastic casing designed to match the A500 wedge shape and has space on its motherboard for 8Mb RAM.

No external power supply is fitted, but IVS claim this will not be necessary due to the unit's low power design.

The model we tested was fitted with the full 8Mb RAM and we didn't encounter any crashes, so the claims about power drainage seem to hold up.

There is a power socket on the rear of the unit for an optional external PSU if the user requires it and a DMA through-port to allow the connection of other devices to the Amiga's DMA slot, such as the A570 CD-ROM drive. Software ➤

KCS adaptor card

The KCS Powerboard PC emulator has been around for a while now, but has until recently been an A500-only product. However, the release of the adaptor board and v3.0 of the system software has over the last couple of months boosted the emulator's power and overall appeal.

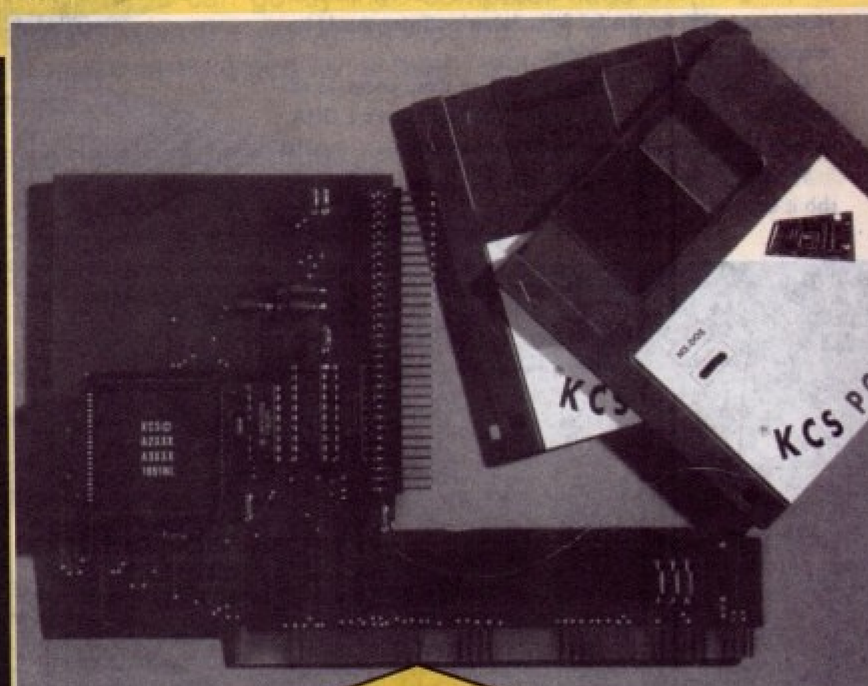
The adaptor card slots into any A1500, A2000, or A3000 and sports an A500 trapdoor slot controlled by a custom chip which handles the conversion from trapdoor to Zorro signals.

Apart from this the unit is very simple, and can be fitted quickly and easily.

At £74.95 it is quite pricey, but it's the only way those who upgrade from the A500 can use their existing Powerboards, and is the only route for existing A2000 owners who want to take advantage of one of the most popular Amiga emulators. With the new Vortex 386SX card on its way, many will elect to wait a bit and spend some more on a proper bridgeboard-style card with more power, but the adaptor board offers one of the best A1500/2000 emulator solutions available at the moment, especially as v3.0 of the KCS software is so much better than previous incarnations.

VGA 16-colour mode is now available, as well as VGA mono, and EGA mode will use the full palette and a software flicker fixing function keeps interlace at bay while in the higher resolution PC modes.

As the KCS still comes supplied with MS-DOS, GW Basic, Shell, and DOS-Help as part of the package price, it has managed to keep up with the newer 286-based emulators, even if it's now slower than most.



KCS Inc.
Supplier: Bitcon Devices Ltd
Phone: 091-490 1919
Price: £74.95

Shop Window

comes in the form of the TCUtils program which has rendered sterling service over the years on the A2000 Trumpcards.

It is fairly easy to use, and less confusing than some hardware installation disks, but if beginners feel lost there's a comprehensive manual complete with sections on hard drive operation principles and general information.

The best aspect of the software is its partitioning gadget, which allows users to select the number and size of partitions with the mouse rather than type in high cylinder numbers and so on.

This is some of the easiest partitioning software around, though on the bottom of the range 52Mb drive there's not much point in splitting the drive into more than one partition in the first place.

Speed is quite good, with data transfer test running out at about 530Kb per second. This is by no means blistering, but it is appreciably better than some drives on the market, and was tested in a no cache or buffering situation, so could be improved if necessary.

The 52Mb version with no extra RAM fitted costs £399, which is in line with most Amiga 52Mb Quantum drives – overpriced – but at this level the 500AT could suffer from competition with the faster SCSI-based (if more expensive) GVP Series II drives. Expect suppliers to price cut this quality product.

Interactive Video Systems
Supplier: Micropace Distribution
Phone: 0753 551888
Price: £399 (52Mb)

Power Computing 8Mb RAM card

The latest externally-fitting A500 8Mb RAM expander, Power Computing's is also one of the cheapest. At £129 for the 2Mb version, and £299 for the full 8Mb, Power's offering should be tempting to the buyer on a budget.

Design hasn't been sacrificed to achieve these prices, as all RAM chips are modern, low power ZIPs and there's a DMA through-port to allow hard drives to be connected.

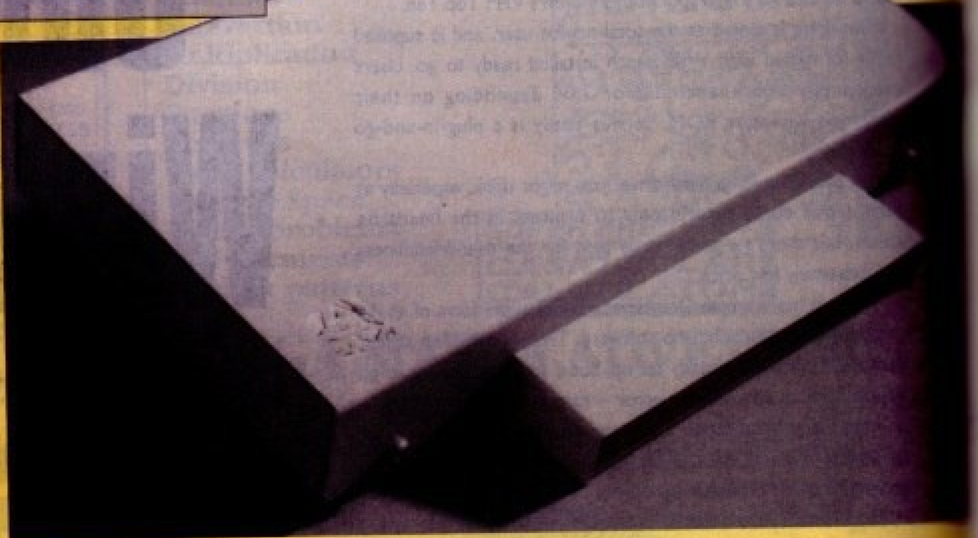
Visually, the unit is fairly basic, and as a flat slab it can make your Amiga stretch out across the desktop somewhat, but it is sturdy and affordable, which is what most of us look for in a RAM expansion.

Reliability is ensured by the RAM chips used, and Power are confident enough about even the 8Mb variant not to offer any kind of optional power supply.

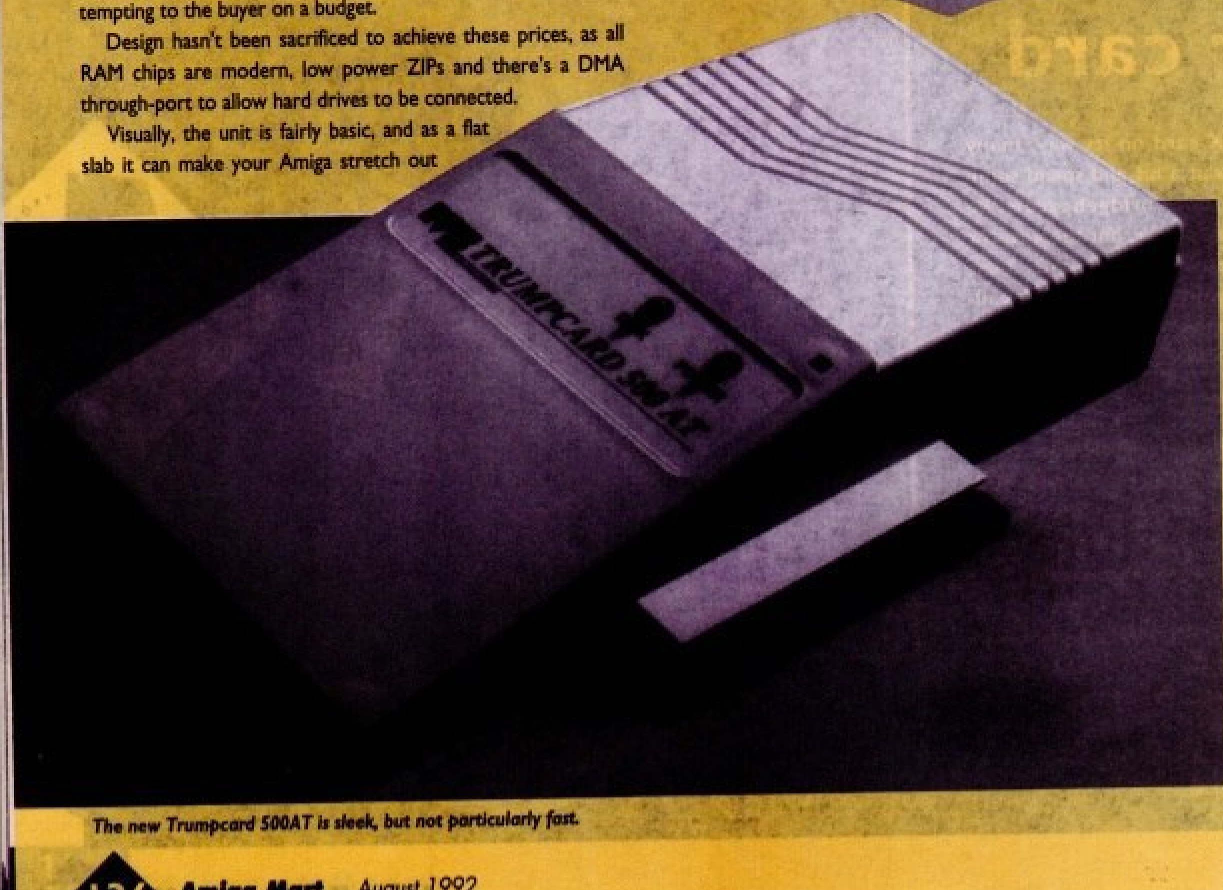
The 2Mb version we tested was very well behaved and gave us reason to believe other configurations would be just as reliable, so the lack of a PSU socket isn't a problem.

If you're an A500 owner with a view to serious applications, the Power RAM board deserves a look.

Power Computing
Supplier: Power Computing
Phone: 0234 843388
Price: £129 (2Mb RAM)



Bulky, but reliable. The The Power 8Mb RAM board



The new Trumpcard 500AT is sleek, but not particularly fast.

Expert Draw

Gold Vision's Expert Draw is a vector drawing program aimed primarily at those who need good quality clip art for use in DTP packages. It offers the basic drawing tools you'd find in any package of this sort, and a number of powerful effects for the user with more intricate design needs.

The program's interface will be familiar to anyone who's used a DTP or drawing package before, as it uses fairly standard gadgets for most of the toolbox icons and reasonably well laid out menus.

However, the file requesters are non-standard and do not respond to double click selections, and some keyboard shortcuts could be more obvious.

That said, the program is very easy to get into, and beginners should have few problems in creating their first drawings.

There's not much to most drawing programs when all is said and done, but many manage to muddy the waters in an attempt to look and feel different to the rest. Expert Draw avoids this temptation and sticks with ease of use.

After a quick smiley face, yin-yang symbol, or one of the other usual vector drawing beginners' drawings, the user will want to move on to something a little more adventurous, and this is where Expert Draw's advanced features come into the picture.

For a program in this price bracket, there are plenty to choose from.

Many make a beeline for is the text-to-curve feature. This is the technique used to bend a line of text around the top half of a circle or along a wavy path and it is ideal for logos or specialist design clips.

Expert Draw's implementation isn't ideal, but it is good enough to satisfy most design needs, if a little awkwardly. You can only select text-to-curve when adding text, which is a disadvantage.

It is better to see the text and curve on the page before deciding to bend one around the other as otherwise it is easy to try to fit a lot of text on a small curve.

It is also difficult to place the text exactly where you want it on a circle or ellipse, but this can be rectified with a quick rotation once the main operation is out of the way.

On the whole, Expert Draw's manipulation of text is excel-

Shop Window

lent, although the ability to point edit outline fonts would have been useful.

The metamorphosis special effect is another useful tool, and capable of producing pretty stunning transitions from one shape to another.

Its limitation is that it will not morph objects with more than 100 curve points, thus ruling out text morphing, but for simpler cube-to-sphere-to-arrow type transitions it is ideal.

For logos, especially those with a message related to speed, the metamorphosis effect can be a real face lifter. Balls which turn into arrows as they speed across the screen and a host of other effects are possible with little effort, giving flyers and ads a pzazz boost in the most important areas.

Another flexible tool is distortion. Using distortion, it is possible to select an object then pull any of its four corners to new positions, thus stretching and distorting its appearance.

In addition, X and Y symmetry can be turned on to ensure that the object isn't completely disfigured.

For 3D fans, X and Y perspective buttons are also available on the distort requester, making the creation of 3D-style logos and headings very easy.

These would be more effective if text shadowing and embossing effects were supported, but the finished logo can still be quite impressive.

In combination with a text object which has already been fitted to an arc or path, distort can put the finishing touches to original text designs which can then be output for use in a DTP package.

Output – or export – is supported in three forms – Encapsulated PostScript (EPS), Clip, and Screen. EPS files are written in Ascii EPS format, so they can be imported to most DTP packages but will not display on-screen; Clip (according to PageStream at least) is written in ProDraw format rather than DR2D; and Screen carries out a screen save in IFF format, complete with toolbox and so on.

The export options are adequate, although they could be better, and the import options follow suit. Clips can be imported in Aegis Draw format, Clip, or Vector Trace. The latter is a proprietary format produced by the program's Autotrace function.

Autotrace is the procedure whereby a bitmap IFF graphic is imported then traced around its outlines to produce a vector graphic, and has until recently been exclusively a feature of far more expensive packages. Expert Draw's Vector Trace works beautifully, if very slowly on unaccelerated machines.

To produce a vector drawing complete with all the advantages of the format from a hand-sketched piece of artwork, the user need only scan it using a cheap mono hand scanner, import it for Vector Trace to get its teeth into, then touch up and colour the final product using Expert Draw's Colour Fill requester.

In this way, hand-drawn artwork can become an integral part of your production without the hassle involved in trying to recreate your masterpiece with an unwieldy mouse.

You needn't stop at hand sketches, either. Any scanned image or bitmap file can be traced, though it is best to stick to black-and-white single bitplane images for speed.

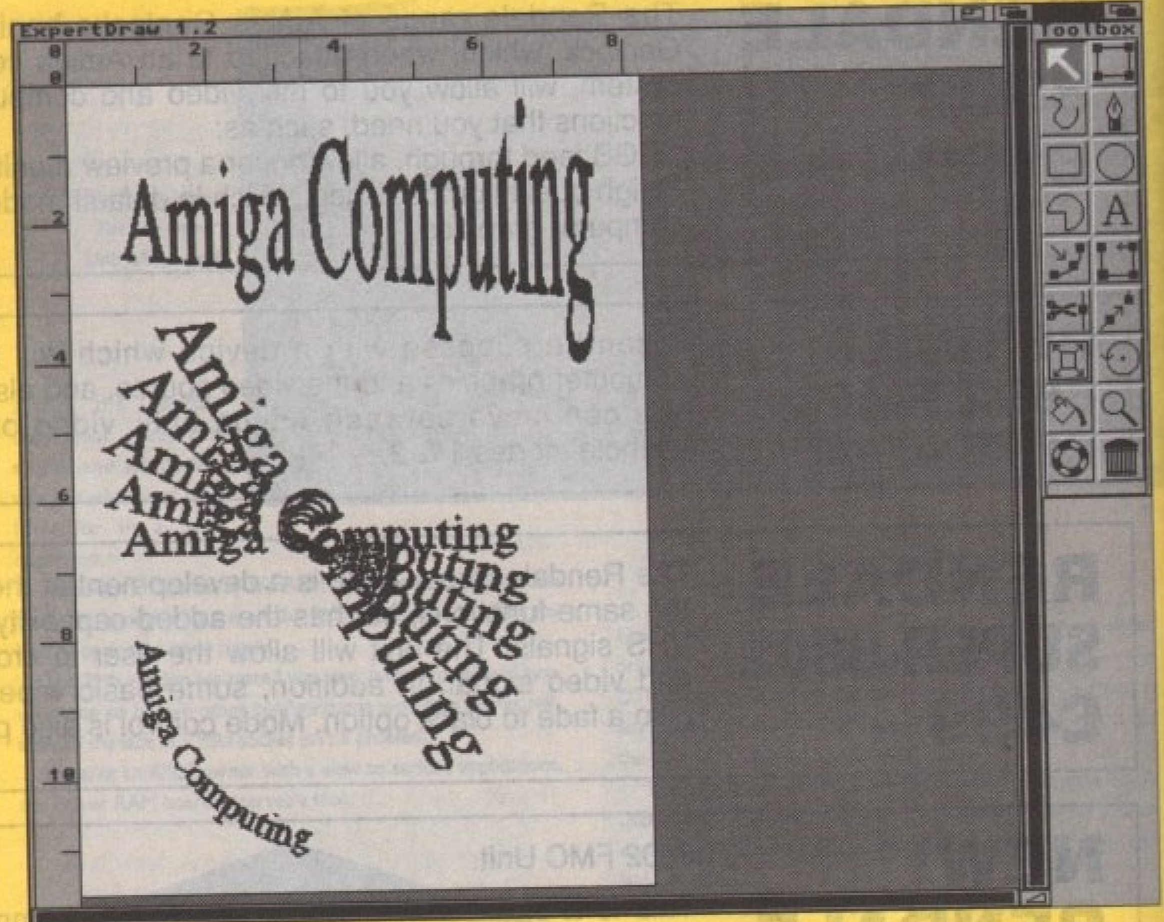
The finished drawing is created in simple outline without colour information, so there's no point in trying to recreate a full colour image on-screen. In addition, an image with anything more than about three bitplanes will take ages to trace, so use Vector Trace circumspectly.

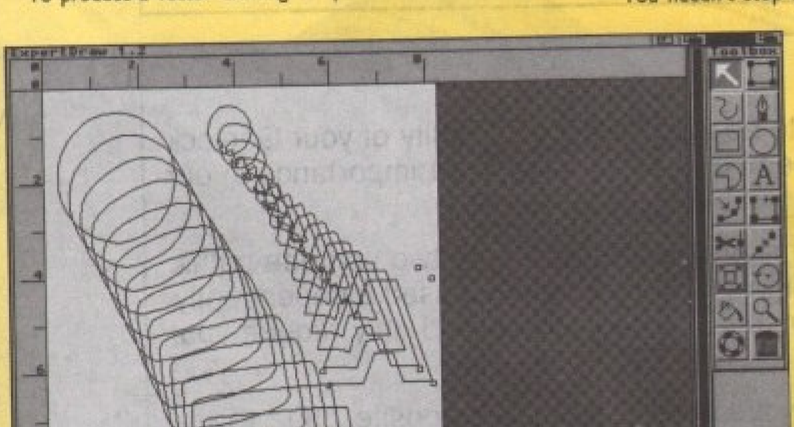
In conclusion, Expert Draw is an ideal tool for the DTP fan, and for its price has some hefty power features. There are a few downs, of course, including the duff file requester, and it should support more font types.

The program is supplied with Times and Helvetica, but you'll need to fork out an extra £39.95 to enable the use of other file formats.

Beside these reservations, Expert Draw can berecommended for most DTP clip art production, and should find its way into the collections of many Amiga artists.

Some of the text effects possible with Expert Draw





metamorphosis can produce startling results

In perspective

The vector war is about to go imto overdrive later this year, with Gold Disk, Soft Logik, and others releasing high-level packages. Expert Draw will probably find it impossible to keep up with the likes of ProDraw £ and Art Expression, but it should remain a good level entry buy.

Keep your eyes peeled for more *Amiga Computing* and *Amiga Mart* reviews in this area.

Gold Vision Communication
Supplier: Genisoft
Phone: 0753 686000
Price: £69.95

AMIGA COMPUTING ADVERTISERS' INDEX

Software spotlight

The best buys in Amiga specialist software. This month – art and animation

If you can beat these prices, give us a ring

If you want to keep in touch with the Amiga scene and the software that makes it tick, this is the place to start. Every month we'll look at a different area, supplying the essential advice that any would-be buyer will find indispensable.

This month we'll concentrate our efforts on art and animation and follow in next month's issue with home and office, which will feature a selection of the best databases, spreadsheets and of course wordprocessors.

DPaintIV

The major advantage of v4 is the inclusion of Ham as a paint and animation standard. Although painfully slow, it still adds immense potential to the package as an animation tool.

As a painting environment it still remains unsurpassed, while new sweeteners such as a lightbox makes animation even easier. The user can now view previous frames or onion skins. As a result, hand-drawn anims can be much more accurate than before.

Combine the best painting environment with Ham animation and the program's unbeatable Move requester – ideal for titling and logo anims – and you've got the best all-rounder in the business.

If you're on a budget DPaintIII is still an excellent investment at only £12.99 from First Choice. No Ham I'm afraid, but as a titling and cartoon-style animation system it's all you'll ever need. Take a look at this month's Updates column for details on the very latest revision of DPaint, v4.1.

DPaintIV
Available from Dynamite Computers
Price £54.99
Score = 9/10

DPaintIII
Available from First Choice
Price £12.99
Score = 8/10

Take2

Animators who produce hand-drawn art hate mice, and that's long been the downfall of computers in the eyes of those with physical skills to match their imagination. Now Rombo have breached the gap with an impressive and affordable answer.

Take 2 uses Rombo's existing digitising technology and applies this to the animation process by taking individual snapshots of hand-drawn images and then compiling each frame to produce traditional Disney-style anims. Line testing software used to be offensively expensive, but thanks to Rombo that's all changed.

Take 2
Available from MJC Computer Supplies
Price £59.95
Score = 9/10

TVPaint

Now this package is strictly for the power users. Originally only available for the Harlequin 32-bit card, it has now spread its wings and moved onto several 24-bit boards. The new beneficiaries include the VD2001 board from G2, the IV24, and most recently the amazingly cheap Avideo.

The package is available direct from the authors, namely TecSoft. Unfortunately the pricing policy varies between boards in some cases by several hundred pounds. As a result accurate pricing is impossible.

Certain boards such as the Harlequin and Avideo boast TVPaint as standard while others are strictly available on an upgrade basis. If you can forgive the extortionate pricing on certain boards it's an essential purchase for the serious user.

As a 24-bit paint package – no animation – it remains unrivalled. If you're considering upgrading to 24-bit art, Avideo is perhaps the perfect introduction as it comes complete with a copy of TVPaint.

TVPaint
Available from Power Computing
Price: £399 (with Avideo)
Score = 10/10

Disney Animation Studio

If you're new to animation and want to learn the process from the best in the business, DAS could be the ideal package. Each of the packages above use vastly different approaches, while DAS employs a combination of the two styles plus a traditional "dope sheet" which any trained animator would be instantly familiar with.

The animation production process itself isn't as fluid as either DPaint or Take 2, but this is offset by an impressive interactive tutorial which will teach an amateur all the basics.

Disney Animation Studio
Available from Amiga Supermarket
Price £59.99
Score = 8/10

Spectracolor

This particular package is in very much the same vein as DPaint – namely, a paint package that doubles as an animation generator. Although the first to boast Ham support, it never really matched DPaint as a standard painting environment.

Having said that, it boasts impressive graduation effects and wraps which are bound to appeal to those looking for a ray-traced look for their creations. If you face a straight choice between the two, personally I'd plumb for DPaint.

Spectracolor
Available from MicroPace
Price £65.99
Score = 8/10

Digiview Mediastation

If you're in the market for an instant graphics workstation but still want to keep an eye on the budget, Digiview Media workstation is perhaps the perfect bundled budget software collection.

The three packages include Digiview, DigipaintIII and Elan Performer. All three packages are rather elderly in software terms, but nevertheless combine to produce a powerful team that allows the user to digitise live or videotaped imagery, import the results into DigipaintIII for editing, and final show the finished presentation via Elan Performer.

Individually, none of the programs could be described as state of the art, but considering their bundled price point it's a system that's well worth considering.

Digiview Mediastation
Available from Amiga Supermarket
Price £129.99
Score = 9/10

Bargain basement

If cash is short, you're still not completely left out in the artistic cold, as an assortment of golden oldies are ready to rescue even the poorest punter. The OAP bargain bucket includes DPaint II at £9.99, Spritz Paint at £9.99 and Photon Paint v2.0 at £19.99.

None of the above support animation but each are nevertheless capable of impressive static images, especially Photon Paint as it's the only one of the three to support Ham – 4,096 colours on-screen. All three packages are available from Dynamite Computers.

If you're interested in any of the above, turn to the advertisers' index at the back. All the prices quoted are based on a survey of last months' offers by the quoted supplier. As a result, it might be worth a stroll through the small ads in search of an even better bargain.

A-Z OF VFM

Hard Times

Every month, a selection of some of the best Value For Money hardware bargains to be found in the pages of *Amiga Computing*. True at-a-glance shopping for all our readers. Remember – if you are a supplier and you can beat these prices, let us know!

FLOPPY DRIVES

Make	ON/Off Switch	Through Port	Single/Double Drv	RRP Price	AC Price
Trilogic					
Roclite RF382c	Y	Y	Single	69-99	55-99
Cumana CAX1000	Y	Y	Double	119-99	99-99
Cumana CAX354	Y	Y	Single	69-99	58-99
Analogic Computers					
Zydec	Y	Y	Double	-	59-95
Hawkwell Electronics					
Citizen or Epson	N	N	Internal A500	69-95	49-95
Power 880E	Y	Y	External anticlick	59-95	59-95
Power880DD	Y	Y	As above X2	119-95	119-90
Power Computing					
PC880E	Y	Y	Single	49-95	-
PC880B	Y	Y	Single	69-95	-
Audition Computers					
Cumana CAX-354	Y	Y	Single	78.22	52.99
Power 880B	Y	Y	Single	69.99	67.99
Delta PI Software					
RoctecRoclite	Y	Y	Single	-	59-95

HARD DRIVES

Make	Capacity (Mb)	Ram upgrades	Compatibility	Game Switch	Through port	PSU	RRP	AC Price
Trilogic								
Dataflyer	45	Y	500/500+	N	N	N	259-99	259-99
Dataflyer	45	Y	500/2000	N	N	N	229-99	229-99
Dataflyer	105	Y	500/500+	N	N	N	389-99	389-99
Dataflyer	105	Y	2000	N	N	N	359-99	359-99
Hawkwell Electronics								
GVP	52	Y	500+	Y	Y	Y	399-95	379-95
Audition Computers								
GVP	105	Y	a500+	Y	Y	Y	-	439.99
Delta PI Software								
Supra Wordsync	52	N			Y	-	-	239-00
Supra Wordsync	105	N	--	Y	-	-	-	379-00
GVP HD8 A2000	52	Y	1500/2000	-	Y	-	-	279-00
GVP HD8 A2000	120	Y	1500/2000	-	Y	-	-	419-00
GVP HD8 A500	52	Y	-	Y	-	-	-	349-00
GVP HD8 A500	120	Y	-	Y	-	Y	-	469-00

RAM BOARDS

Make	Capacity	On/Off Switch	Chip RAM Upgrade	Internal /External	Compatibility	RRP	AC Price
Trilogic							
Trilogic	1meg	N	Y	Int	500+	49-99	39-99
Baseboard	0.5-4meg	N	Y	Int	500/500+	79-99 to	199-99
Dataflyer Ram	1-8meg	N	Y	Int	1500/2000	89-99 (Unpopulated)	
Hawkwell Electronics							
Virgo v500	0.5meg	Y	Y	Int	500	-	24-95
Virgo v500+Clk	0.5meg	Y	Y	Int	500	-	29-95
Power PCR1.5	1.5meg	Y	Y	Int	500	99-95	89-95
Virago V4000	4meg	Y	Y	Int	500	198-00	198-00
Analogic Computers							
ADD	A500/0.5meg+clk	Y	Y	Ext	500	-	24.95
ADD	A500/0,5meg	N	Y	Ext	500	-	34.95
ADD	A500/1meg	N	Y	Ext	500	-	54.95
Power Computing							
Power	A500/0.5meg+clk	Y	Y	Int	500	29-00	-
Power	A500/0.5meg	Y	Y	Int	500	24-00	-
Power	A500/+/0.5meg+clk	Y	N	Int	500	24-00	-
Power	A500/+/0.5meg	Y	N	Int	500	19-00	-
Power	A500/1.5meg	N	Y	Int	500	79-00	-
Power	A500/1 meg	N	Y	Int	500	49-00	-
Power	A500/1meg	N	Y	Int	500	39-00	-
Power	A500/8meg	N	Y	Int	500	2meg	129-00
						4meg	189-00
						8meg	299-00
Power	A500/2meg	N	Y	Ext	500	99-95	99-95
Delta PL Software							
Supra Ram 2000/	2-8meg	N	N	Int	-	149-00	
Supra Ram 500rx/	2-8meg	Y	-	Ext	-	149-00	

SAMPLERS

Make	Mono/Stereo	Max Sample Rate	Midi Compatible	Bundled Software	RRP	AC Price
Trilogic						
Trilogic	Stereo	100k	N	Y	39-99	37-99
Audioengineer	Stereo	50k	N	Y	204-99	179-99
Mastersound	Stereo	27k	N	Y	40-82	34-99
Technosound	Stereo	27k	N	Y	39-99	32-99

DIGITZERS

Make	Colour/Mono	Max No.Colour	Snapshot Facility	Inputs/Outputs	RRP	AC Price
Trilogic						
JCLcolour pic	Colour	4096	Y	-	499-99	399-99
CLsuper pic	Colour	4096	Y	-	599-99	499-99
Digiview	Colour	4096	N	-	149-99	99-99
Vidi Amiga	Mono/col	4096	Y	-	179-99	139-99

NEXT MONTH

More of your best buys. They don't go in unless you tell us about them, so if you see a better buy, or can beat those shown, get on the phone to:

Amiga Mart VFM
0625 878888

Hard Times

TOP 10

Every month the *Mart* picks the best from the rest in our top ten hardware, software chart...

1	GVP A530 Combo 40MHz/52Mb	£659.95	Dynamite Computers
2	DPaintIV	£54.99	Dynamite Computers
3	Power Hand Scanner plus Photon Paint	£99.95	Dynamite Computers
4	Adobe Type1 Postscript fonts (five disks)	£12.50	Computegraphic
5	A600 (with software bundle)	£384.99	Phoenix
6	Citizen 120D+ (nine-pin)	£115	Silica Systems
7	Broadcast Titler II	£159.95	MJC
8	Power 8Mb for the A500 2Mb	£129	Power Computing
9	Star LC24-200 Mono Printer	£249.95	Future World Computers
10	Philips CM8833 Mk II	£ 209.99	Audition Computer services

SCANNERS

Make	Type	Scan Area(mm)	Max DPI	Colour/Mono	RRP	AC Price
Trilogic						
Zydec	Hand	105	400	Mono	99-99	94-99
Audition Computers						
Power	Hand	105	400	Mono	99-00	99-99
Power Computing						
Power Scan	Hand	105	400	Mono	99-00	99-00
Delta PISoftware						
Alfa-Data	Hand	-	400	Mono	-	139-00
Alfa-Data	Hand	-	400	Col	-	249-00

GENLOCKS

Make	S-VHS composite	Through Port	RRP	AC Price
Marcam LTD				
Rendale 8802	Y	N	-	139-00
Rendale 8802 fmc	Y	N	-	178-00
Rendale Super 8802	Y	N	-	499-00
Syntronixs				
Genmaster	Y	Y	-	-
Dynamite				
Rocgen	Y	N	-	84.99
Rocgen Plus	Y	Y	-	129-00

PRINTERS

Make	Dot/Laser/Ink	Max Dpi	Built in Fonts	Front Panel Control	Paper Feed	Max CPS	Col/Mono	RRP	AC Price
Trilogic									
CitizenSwift	(dot)	9	4	Y	Y	192/48	Both	-	199-99
Citizen 24	(dot)	24	4	Y	Y	-	Both	-	269-99
Canon Bj10ex	Bubblejet		-	Y	Y	-	Black	-	269-99
Audition Computers									
Star	Dot	9	5	Y	Y	-	Col	-	199-99
Citizen	Dot	24	6	Y	Y	-	Col	-	249-99
Delta Pi Solftware									
Star Lc-20	Dot	9	8	Y	-	-	Col	-	135-00
Star Lc-200	Dot	9	9	Y	-	-	Col	-	195-00
Star Lc-24-20	Dot	24	10	Y	-	-	Mono	-	199-00
Star Sj-48	Bubble Jet	48	2	Y	-	-	Mono	-	235-00
Hp 500c	Ink Jet	300	3	Y	Y	-	Colour	-	621-00

Classifieds

◆ A2000, 3mb ram, 40mb hard disk, A2286 bridgeboard £700. Tel. Colin 0932 821357

A1500/A2000, 1209DA hard disk controller plus Seagate 40 meg drive £100 ono. Tel. 09467 28780

◆ Colour video camera Hitachi VK-C600. Can be used for digitising £125 ono. Tel 0732 461525

◆ A500 1mb boxed as new. Many games, KS1.3 £250. Tel. Nigel 0233 647115

◆ Amiga maties wanted. Send into to Gary, 6 Salthill Way, Slough, Berks SL1 3TR. 100% reply

◆ XT BB with 5 1/4" drive £50. KS 1.3 Rom £20. Janus 40mb £50. Tel. 040377 545

◆ CBM 1084S monitor. Very good condition. £165. Tel. Peter 0273 220859

◆ Philips CM11342 monitor. Same as 8833 MK II. As new, boxed. £180. Tel. Brighton 220859

◆ Virus checked PD games 20 for £15. SAE Arthur, 52 Skipsea View, Sunderland, Tyne & Wear SR2 0BX

◆ Okimate 20 Colour printer, lots of ribbons and thermal paper. £85 plus PP. Tel. 0202 696690

◆ Amstrad SM2400 modem V22bis V22 V21 V23. £150. Pace ECU MNP4 £80. Tel. 047483 3173

◆ A500 with 1mb, boxed with all Workbench disks/manuals, with games. £285. Tel. 0625 610813.

◆ Amiga games, Alien Breed £10. Power Pack £10. Many more titles. Tel. 0825 790936.

◆ European Amiga contacts wanted. Claudia Stevenson, 16 Malory Ave, West Pymble, 2073, NSW Australia

◆ Enfield Amiga club to form, new members. Tel. Sean 081 804 2867

◆ Amos + Compiler (original) and various games for sale. Tel. 0442 233968

◆ Amiga and Atari ST games from £3 to £12. Tel. Laurence 0263 721374 after 4.30 pm

◆ A3000 owner wants friends to paly games, make music samples graphics etc. Contact Paul, 26 Coleys Lane, Northfield, Birmingham B31 4AD

◆ Oscilloscope Tektronix 465 100 Mhz Probes Service Manual. Perfect £290. Exchange Colour Printer. Tel. 0245 323106

◆ PD contacts, lists wanted also swap games. POE 29 Tilehurst Place, Blurton, Stoke on Trent, Staffordshire ST3 3AP

◆ A500 type GVP 52mb HD8t, 2 months old, upgrading to 1500 HD £300. Tel. 091 3710668

◆ Amiga contacts wanted to swap games, graphics and music! David, 77 Bann Drive, Waterside, Londonderry BT47 2HL

◆ PD contacts wanted to swap latest demos and utils. Tel. Simon 0744 813532

◆ 512k memory upgrade £15. Write Stuart Hogton, 62-2 Mill Road, Salisbury, Wilts SP2 7RT

◆ Amiga contacts wanted 100% reply. Chris, 3 Rosehill South Road, Bowden, Altringham, Cheshire WA14 2LB

◆ A590 20mb hard drive, boxed as new £200 ono. Wants computer magazines. Tel. 0256 704932

◆ Wanted for A500 game Skweek about 2 1/2 years ikd, Tel. 0752 700743 Cash waiting

◆ PC Engine core grafx console plus game boxed like new £95. Tel. 0685 884449

◆ Wanted SEUCK. K Keimpema, Nykampen, 61 Westerbork, Holland .Tel. Holland 05933 32207

◆ A500 Cartoon Classics 14" TV guarantee Amigados books(c) mags Joystick 70+ disks £450 ono can deliver. Tel. 0384 298027

◆ Software, Spectra colour, Lights Camera Action, Animagic, Video Titler, Provided Companion, Digipaint 3, Kindwords, many still boxed. £25 each. Tel. 0727 868415 St Albans

◆ Amiga 500, 1mb, 1.3 rom, Workbench, mouse Dpaint 2, Pagesetter, + several games, 4 months warranty £240. Tel. 0599 84380

◆ NEC multisync colour monitor, swivel stand, Amiga interlace, productivity or PC VGA £240. Tel. 0565 722518

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◆ RSI demo maker 2 plus vector balls, grafix editors and music disk £5. Tel. 0789 764039 now!

◆ Amiga contacts wanted don't miss out. Write George Bird, 90 Coronation drive, Felixstowe, Suffolk IP11 8PA

◆ Amiga contacts wanted to swap PD, Demos etc. Andy, 125 Droset Ave, Wigston, Leicester LE8 2WE

◆ Wanted members for club. No fee. Demos and user group. C E Nobites, 36 Botcherby Ave, Carlisle CA1 2TY

◆ Amiga and Amos contact wanted worldwide. Jason Howells, Lane Cottage, Appleton Wiske DL6 2AD

◆ Amiga contacts wanted, 100% reply. Contact Keith, 14 Severn Close, Peterlee, County Durham SR8 1JX

◆ Amiga Contacts wanted. Send disk for lists. David Southwell, 3 Nutting Grove Terrace, Old Farnley, Leeds LS12 5RB

◆ Virus checked PD games. 25 £15. SAE Mr Storey, 52 Skipsea View, Sunderland SR2 0BX

◆ Swap PD or buy, send SAE list to Wayne, 37 Cassiobridge Road, Watford, Herts WD1 7QL

◆ Require assistance setting up BBS. Contact Simon Canning, 186 Oxford Road, Marlow, Bucks SL7 2PR

◆ Amiga/Amiga+ PD, for detailed list of games, music, demos, utils send disk and SAE to Red, 74 Durban Road, Patchway, Bristol BS12 5HQ

◆ Amiga Contacts wanted worldwide. Write or send disk to Steve, 13 Coronation Ave, Wigston, Leicester LE18 2BN

◆ Experienced Amiga 'To The Metal" Programmer seeks graphics Artist to produce a game. Sound Fx musician also sought. All areas of the country considered. Don't delay and it could be ready for Christmas day

◆ Swap one for one send list and or disks. Mine in return 100% reply. John,113 Kingswood Ave, Park North, Swindon SN3 2RF

◆ Demo group seeks contacts Glen McNamee 246. Overdale Road, Park End, Middlesbro, Cleveland TS30 0BU

◆ Luxton 5.5" colour TV £110. Genlock 8802 board all cables included £60. Tel. 081 870 3034 after 8.00pm

◆ A590 hard drive with 2mb ram. Installed with Dpaint III and Amos. Only £250. Tel. 0734 426522

◆ PD and games to swap. Send to Jonathan at 56 Palmerston Road, Denton, Manchester M34 2NY

◆ First Samurai £10, Musicx £30, Stereo Master with hardware £10. All boxed. Tel. 0252 375572

◆ I'm looking for Amiga friends. Please write, Piotr Czarnecki, Ul. Sandomierska 37/97, Bydgoszcz 85-830, Poland

◆ Novell Ethernet NE1000 network card £75. Tel. 0332 840725

◆ A590 hard drive boxed as new £200 ono. Want back issues of Amiga Computing and Amiga Format also want friends to swap PD Tel. 0256 704932

◆ Amiga A500 2.3mb, 100+ games 2nd disk drive mags, manuals Tel. James 0534 47010 £350

◆ 1MB A500 Plus External Drive 1084 monitor mouse J/S manuals utilities games £385. Tel Huntingdon 52329

◆ An Amiga workhorse for sale, 2 meg A500, 1 meg chip £300, COD possible. Ian 05047 68814

◆ Spectrum ZX+3, 128K disk drive, joystick, lightgun, games; Operation Wolf, Hard Drivin' etc. £90, 0332 514063

◆ Amiga contacts wanted 100% reply. Peter, 0904 62876

◆ A2000 at Bridge Board, 286 with 5.25 , £50, also Intel A80387 DX-20 £75. 081 907 0052

Classifieds

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on the Amiga (1 Meg only)

"American Football Coach is a good game...It's certainly worth a look as the game play is superior to many full-blown simulations. I'll end by saying that it's extremely tough to have a winning season because the AI (artificial intelligence) definitely plays hardball. Are you tough enough?" –
REVIEW...STRATEGY PLUS, ISSUE 16...Feb 1992

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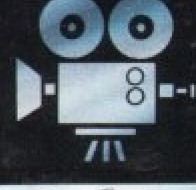
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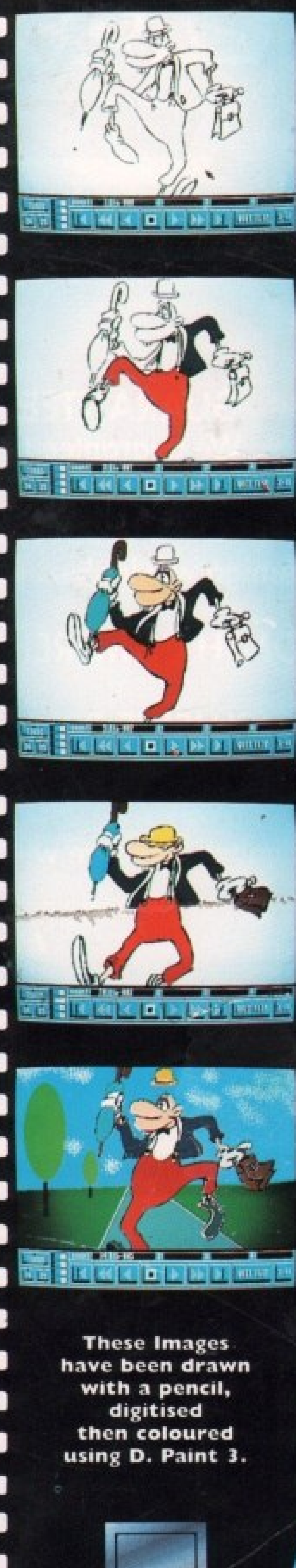
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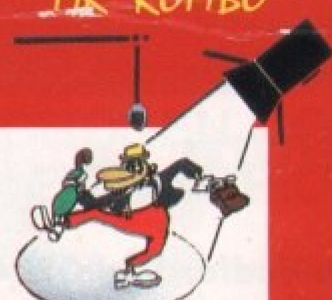
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